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A TABLE OF THE INVERSE SINE-AMPLITUDE FUNCTION IN THE COMPLEX DOMAIN

HENRY E. FETTIS
JAMES C. CASLIN

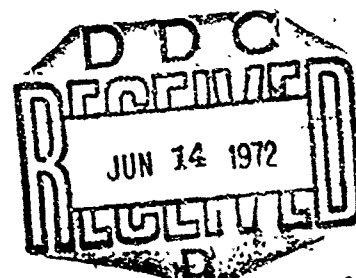
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13. ABSTRACT Let $z = \text{sn}(w, k)$ be the Jacobian sine-amplitude function as defined, e.g. in [1]. The tables list five-D values of the quantity $w = u + iv$ where z is given by $z = a + ib$, for the following values $\begin{array}{ll} a = 0(.1)1 & ; b = 0(.1)1 \\ a = .9(.01)1 & ; b = 0(.1)1 \\ a = 0(.1)1 & ; \frac{1}{b} = .01(.01).1 \\ a = 0(.1)1 & ; \frac{1}{b} = .1(.1)1 \\ \frac{1}{a} = .01(.01).1 & ; b = 0(.1)1 \\ \frac{1}{a} = .1(.1)1 & ; b = 0(.1)1 \\ \frac{1}{a} = .01(.01).1 & ; \frac{1}{b} = .01(.01).1 \\ \frac{1}{a} = .1(.1)1 & ; \frac{1}{b} = .1(.1)1 \end{array}$ The values of u and v are expressed as decimal portions of the quarter-periods K and K' respectively. The modulus is given in the form $k = \sin \theta$, with $\theta = 5^\circ(5^\circ)85^\circ(1^\circ)89^\circ$.			

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Conformal mapping

ARL 72-0050

**A TABLE OF THE INVERSE SINE-AMPLITUDE
FUNCTION IN THE COMPLEX DOMAIN**

HENRY E. FETTIS

JAMES C. CASLIN

APPLIED MATHEMATICS RESEARCH LABORATORY

APRIL 1972

PROJECT 7071

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AEROSPACE RESEARCH LABORATORIES
AIR FORCE SYSTEMS COMMAND
UNITED STATES AIR FORCE
WRIGHT-PATTERSON AIR FORCE BASE, OHIO

FOREWORD

The present tables were prepared by the Applied Mathematics Research Laboratory of Aerospace Research Laboratories, under Project No. 7071. The computations were initiated by Mr. Henry E. Fettis, and carried out by Mr. James C. Caslin on the CDC 6600 electronic digital computer.

ABSTRACT

Let $z = \text{sn}(w, k)$ be the Jacobian sine-amplitude function as defined, e.g. in [1]. The tables list five-D values of the quantity $w = u + iv$ where z is given by $z = a + ib$, for the following values

$$\begin{array}{ll} a = 0(.1)1 & ; \quad b = 0(.1)1 \\ a = .9(.01)1 & ; \quad b = 0(.1)1 \\ a = 0(.1)1 & ; \quad \frac{1}{b} = .01(.01).1 \\ a = 0(.1)1 & ; \quad \frac{1}{b} = .1(.1)1 \\ \frac{1}{a} = .01(.01).1 & ; \quad b = 0(.1)1 \\ \frac{1}{a} = .1(.1)1 & ; \quad b = 0(.1)1 \\ \frac{1}{a} = .01(.01).1 & ; \quad \frac{1}{b} = .01(.01).1 \\ \frac{1}{a} = .1(.1)1 & ; \quad \frac{1}{b} = 1(.1)1 \end{array}$$

The values of u and v are expressed as decimal portions of the quarter-periods K and K' respectively. The modulus is given in the form $k = \sin \theta$, with $\theta = 5^\circ(5^\circ)85^\circ(1^\circ)89^\circ$.

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INTRODUCTION

The Jacobian elliptic functions with complex argument occur primarily in problems of conformal mapping (see, e.g. [4]). Tabulated values of these functions can be found in [2] and [3]. Frequently it is desirable to know the inverse function, for example, to find w if $\text{sn}(w)$ is given. This would require interpolation in two variables, which is both inconvenient and inaccurate, particularly in some regions where a small change in the argument results in a large change in the function. The charts in [2] can be employed to obtain qualitatively correct values of the inverse function, but to date no explicit tabulation is known.

The present tables give values of the inverse sine-amplitude function $w = u + iv$ for values of a and b which cover the entire first quadrant of the $a + ib$ plane. The quantities u and v are expressed in the form u/K and v/K' where $K = K(k)$ and $K' = K(k')$ are the complete elliptic integrals with modulus k and $k' = \sqrt{1 - k^2}$, respectively. These quantities define the quarter-periods of the corresponding elliptic functions.

THE ADDITION FORMULA FOR THE INVERSE SINE-AMPLITUDE FUNCTION

Since by definition

$$u + iv = \text{sn}^{-1}(a + ib) = F(\psi, k) \quad (1)$$

where

$$a + ib = \sin(\psi) = \sin(\theta + i\phi), \quad (2)$$

the problem of obtaining the inverse sine-amplitude function is actually equivalent to computing the elliptic integral with complex amplitude. This could of course be accomplished directly either by series or reduction of modulus. However, a simpler method can be derived by using the addition formula for the amplitude function.

We have, considering first the case of real argument,

$$\psi = \theta + \phi = \text{am}(u+v) \quad (3)$$

and by the addition formula [1]

$$\begin{aligned} \tan \theta &= \text{tn } u \text{ dn } v \\ \tan \phi &= \text{tn } v \text{ dn } u \end{aligned} \quad (4)$$

where the modulus of the elliptic functions is k .

Eliminating successively $\text{sn } u$ and $\text{sn } v$ between Eqs (4) we get

$$k^2 \cos^2 \phi \text{sn}^4 u - [1 + k^2 (\sin^2 \theta \cos^2 \phi - \cos^2 \theta \sin^2 \phi)] \text{sn}^2 u + \sin^2 \theta = 0 \quad (5)$$

$$k^2 \cos^2 \theta \text{sn}^4 v - [1 + k^2 (\cos^2 \theta \sin^2 \phi - \sin^2 \theta \cos^2 \phi)] \text{sn}^2 v + \sin^2 \phi = 0$$

Solving gives

$$\text{sn } u = \frac{\sqrt{(1 + k \sin \theta \cos \phi)^2 - k^2 \cos^2 \theta \sin^2 \phi} - \sqrt{(1 - k \sin \theta \cos \phi)^2 - k^2 \cos^2 \theta \sin^2 \phi}}{2k \cos \phi} \quad (6)$$

$$\text{sn } v = \frac{\sqrt{(1 + k \cos \theta \sin \phi)^2 - k^2 \sin^2 \theta \cos^2 \phi} - \sqrt{(1 - k \cos \theta \sin \phi)^2 - k^2 \sin^2 \theta \cos^2 \phi}}{2k \cos \theta}$$

Making use of Eq. 2 and the result

$$\begin{aligned}\cos \theta &= \frac{1}{2} \{ \sqrt{(1+b)^2 - a^2} + \sqrt{(1-b)^2 - a^2} \}, \\ \cos \phi &= \frac{1}{2} \{ \sqrt{(1+a)^2 - b^2} + \sqrt{(1-a)^2 - b^2} \},\end{aligned}\tag{7}$$

Eqs. 6 may be written explicitly in terms of a and b .

In the case of complex argument v is replaced by iv , ϕ by $i\phi$, and b by ib . The first equation 6 becomes

$$\begin{aligned}\operatorname{sn}(u, k) &= \frac{\sqrt{(1+ka)^2 + (kb)^2} - \sqrt{(1-ka)^2 + (kb)^2}}{2k \cosh \phi} \\ &= \frac{\sqrt{(1+a)^2 + (b)^2} - \sqrt{(1-a)^2 + (b)^2}}{\sqrt{(1+ka)^2 + (kb)^2} + \sqrt{(1-ka)^2 + (kb)^2}}\end{aligned}\tag{8}$$

while the imaginary part is more easily calculated from the second Eq. 4, after using the transformation $\operatorname{tn}(iv, k) = \operatorname{sn}(v, k')$

$$\operatorname{sn}(v, k') = \frac{\tanh \phi}{\sqrt{1 - k^2 \operatorname{sn}^2 u}}\tag{9}$$

With $\operatorname{sn}(u, k)$ and $\operatorname{sn}(v, k')$ known it is easy to find u and v by the conventional method of modulus reduction from the formulae

$$u = F(\alpha, k)$$

$$v = F(\beta, k')$$

where $\sin \alpha = \operatorname{sn} u$, $\sin \beta = \operatorname{sn} v$.

In the case where $b = 0$, Eqs. 8 and 9 simplify to

$$\begin{aligned} \operatorname{sn}(u, k) &= \frac{(1 + ka) - |1 - ka|}{2k \cosh \phi} \\ \operatorname{sn}(v, k') &= \frac{\tanh \phi}{\sqrt{1 - k^2 \operatorname{sn}^2 u}} \end{aligned} \quad (10)$$

$$\cosh \phi = \frac{1}{2}[(1 + a) + |1 - a|]$$

If $a < 1$, the above equations give

$$\begin{aligned} \phi &= 0 \\ \operatorname{sn}(u, k) &= a \\ \operatorname{sn}(v, k) &= 0 \end{aligned} \quad (11)$$

and

$$u + iv = F(\sin^{-1} a, k). \quad (12)$$

If $a > 1$ and $ka \geq 1$, we obtain

$$\begin{aligned} \cosh \phi &= a \\ \tanh \phi &= \sqrt{a^2 - 1/a} \\ \operatorname{sn}(u, k) &= 1/ka \\ \operatorname{sn}(v, k') &= 1. \end{aligned} \quad (13)$$

Hence

$$u + iv = F[\sin^{-1}(1/ka), k] + iK'(k). \quad (14)$$

Finally if $a > 1$ and $ka \leq 1$

$$\cosh \phi = a$$

$$\operatorname{sn}(u, k) = 1 \quad (15)$$

$$\operatorname{sn}(v, k') = \sqrt{a^2 - 1}/ak'$$

and

$$u + iv = K(k) + iF(\sqrt{a^2 - 1}/ak', k'). \quad (16)$$

If $ka = 1$, both Eqs. 14 and 16 give

$$u + iv = K(k) + iK'(k) \quad (17)$$

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- [1] Byrd, P. F. and Friedman, M. D., "Handbook of Elliptic Integrals for Engineers and Physicists", Springer (1954, 1971).
- [2] Fettis, Henry E. and Caslin, James C., "Elliptic Functions for Complex Arguments", ARL TR 67-0001 (Jan 1967).
- [3] Henderson, F. M., "Elliptic Functions with Complex Arguments", University of Michigan Press (1960).
- [4] Kober, H., "Dictionary of Conformal Representations", Dover (1952).

$$\frac{U/K+IV/K'}{-1}$$

$$J+IV=SN \quad (A+IB)$$

$$K=\sin 5$$

B	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
0.00	0.00000 0.00000	.06365 .00000	.12795 .00000	.19363 .00000	.26154 .00000	.33281 .00000	.40908 .00000	.49303 .00000	.58975 .00000	.71235 .00000	1.00000 .00000
.10	0.00000 .02605	.06333 .02618	.12728 .02659	.19253 .02730	.25949 .02840	.33038 .03003	.40542 .03244	.48711 .03617	.57879 .04244	.68517 .05484	.79997 .06350
.20	0.00000 .05185	.06239 .05210	.12532 .05287	.18936 .05423	.25518 .05630	.32352 .05932	.39530 .06367	.47152 .07007	.55294 .07985	.63825 .09531	.71956 .11896
.30	0.00000 .07716	.06091 .07750	.12225 .07858	.18445 .08045	.24737 .08328	.31325 .08731	.38072 .09294	.45052 .10079	.52211 .11175	.59335 .12687	.65985 .14670
.40	0.00000 .10177	.05901 .10219	.11632 .10349	.17822 .10574	.23898 .10908	.30073 .11374	.36370 .12005	.42745 .12844	.49110 .13941	.55314 .15342	.61071 .17048
.50	0.00000 .12555	.05681 .12602	.11380 .12746	.17113 .12994	.22831 .13358	.28716 .13855	.34574 .14510	.40424 .15349	.46184 .16399	.51729 .17677	.56900 .19173
.60	0.00000 .14832	.05443 .14829	.10893 .15040	.16357 .15299	.21834 .15675	.27315 .16180	.32780 .16830	.38184 .17641	.43460 .18626	.48519 .19788	.53260 .21117
.70	0.00000 .17023	.05196 .17074	.10392 .17228	.15586 .17489	.20770 .17863	.25931 .18360	.31043 .18988	.36067 .19757	.40951 .20672	.45629 .21730	.50034 .22922
.80	0.00000 .19107	.04949 .19157	.09892 .19309	.14822 .19565	.19728 .19929	.24593 .20408	.29391 .21005	.34069 .21726	.38646 .22572	.43014 .23537	.47144 .24613
.90	0.00000 .21090	.04707 .21139	.09405 .21286	.14083 .21532	.18727 .21892	.23319 .22336	.27837 .22899	.32252 .23571	.36531 .24350	.40636 .25233	.44535 .26210
1.00	0.00000 .22976	.04474 .23022	.08937 .23163	.13376 .23398	.17776 .23729	.22119 .24157	.26386 .24683	.30551 .25337	.34588 .26025	.38468 .26834	.42165 .27725

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 10$$

B	A=0.00	A= .10	A= .20	A= .30	A= .40	A= .50	A= .60	A= .70	A= .80	A= .90	A=1.00
0.00	0.00000 0.00000	.06329 .00000	.12724 .00000	.19259 .00000	.26020 .00000	.33123 .00000	.40733 .00000	.49120 .00000	.58799 .00000	.71095 .00000	.00000 .00000
.10	0.00000 .03166	.05296 .03182	.12655 .03212	.19147 .03321	.25053 .03457	.32877 .03659	.40362 .03950	.48521 .04419	.57692 .05194	.68350 .06724	.79865 .10255
.20	0.00000 .06300	.06200 .06331	.12456 .06426	.19226 .06595	.25375 .06852	.32181 .07226	.39336 .07766	.46944 .08555	.55076 .09768	.63812 .11678	.71751 .14599
.30	0.00000 .09372	.06050 .09416	.12144 .09549	.18326 .09782	.24642 .10133	.31133 .10634	.37857 .11332	.44815 .12305	.51954 .13662	.59070 .15534	.65891 .17988
.40	0.00000 .12359	.05857 .12412	.11744 .12573	.17692 .12852	.23728 .13268	.29872 .13848	.36129 .14631	.42474 .15672	.48821 .17034	.54993 .18770	.60728 .20887
.50	0.00000 .15242	.05633 .15300	.11284 .15480	.16970 .15789	.22703 .16241	.28486 .16860	.34304 .17674	.40115 .18717	.45840 .20023	.51352 .21611	.56490 .23471
.60	0.00000 .18007	.05399 .18070	.10788 .18259	.16200 .18582	.21627 .19050	.27060 .19679	.32477 .20488	.37836 .21498	.43068 .22724	.48084 .24172	.52783 .25827
.70	0.00000 .20649	.05138 .20713	.10276 .20905	.15413 .21230	.20542 .21697	.25642 .22317	.30706 .23101	.35677 .24060	.40509 .25201	.45136 .26522	.49490 .28009
.80	0.00000 .23155	.04886 .23228	.09766 .23418	.14634 .23738	.19477 .24193	.24291 .24791	.29018 .25536	.33657 .26439	.38154 .27495	.42452 .28702	.46533 .30049
.90	0.00000 .25556	.04638 .25617	.09267 .25801	.13877 .26110	.18453 .26547	.22978 .27116	.27428 .27820	.31776 .28661	.35988 .29637	.40027 .30743	.43858 .31968
1.00	0.00000 .27824	.04400 .27883	.08788 .28059	.13152 .28353	.17478 .28758	.21748 .29305	.25941 .29965	.30032 .30747	.33995 .31649	.37801 .32654	.41423 .33784

$$\frac{U/K+IV/K'}{-1}$$

$$J+IV=SN' (A+0.2)$$

$$K=SN' 15$$

B	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
0.00	0.00000 0.00000	.06268 .00000	.12605 .00000	.19085 .00000	.25797 .00000	.32852 .00000	.40439 .00000	.48812 .00000	.58502 .00000	.70850 .00000	1.00000 .00000
.10	0.00000 .03606	.06235 .03625	.12535 .03684	.18371 .03789	.25626 .03950	.32607 .04184	.40060 .04539	.48201 .05080	.57376 .05988	.68067 .07775	.79641 .11895
.20	0.00000 .07175	.06137 .07211	.12331 .07324	.18641 .07723	.25136 .07826	.31895 .08267	.39012 .08902	.46592 .09834	.54714 .11252	.63251 .13490	.71400 .16908
.30	0.00000 .10671	.05983 .10722	.12010 .10880	.18129 .11155	.24385 .11569	.30821 .12153	.37499 .12932	.44417 .14127	.51530 .15722	.58620 .17921	.65222 .20804
.40	0.00000 .14066	.05784 .14128	.11600 .14319	.17476 .14649	.23447 .15140	.29521 .15824	.35728 .16748	.42021 .17975	.48321 .19580	.54451 .21626	.60145 .24120
.50	0.00000 .17338	.05554 .17407	.11127 .17620	.16736 .17985	.22335 .18520	.28106 .19251	.33855 .20213	.39602 .21445	.45265 .22987	.50716 .24863	.55794 .27062
.60	0.00000 .20471	.05304 .20545	.10616 .20769	.15344 .21151	.21288 .21705	.26640 .22450	.31978 .23408	.37258 .24603	.42414 .26055	.47355 .27770	.51977 .29732
.70	0.00000 .23458	.05044 .23533	.10089 .23761	.15133 .24147	.20170 .24701	.25185 .25433	.30153 .26365	.35035 .27502	.39777 .28856	.44314 .30424	.48576 .32192
.80	0.00000 .26295	.04784 .26370	.09562 .26595	.14329 .26975	.19072 .27516	.23774 .28221	.28411 .29113	.32949 .30183	.37345 .31439	.41550 .32876	.45515 .34480
.90	0.00000 .28984	.04528 .29056	.09047 .29275	.13547 .29642	.18013 .30162	.22428 .30839	.26768 .31677	.31004 .32678	.35103 .33941	.39027 .35160	.42739 .36622
1.00	0.00000 .31527	.04282 .31597	.08552 .31806	.12797 .32157	.17005 .32651	.21155 .33291	.25227 .34077	.29197 .35009	.33036 .36086	.36745 .37299	.40207 .38638

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+B)$$

$$K=\sin 20$$

B	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
0.00	0.00000	.06184	.12439	.18141	.25434	.32486	.40023	.48374	.58077	.70499	1.00000
	0.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
.10	0.00000	.66150	.12366	.18724	.25308	.32227	.39633	.47748	.56924	.67653	.79315
	.03985	.04007	.04076	.04197	.04393	.04657	.05062	.05685	.06729	.08776	.13495
.20	0.00000	.06048	.12155	.18383	.24802	.31493	.38554	.46094	.54195	.62730	.70888
	.07927	.07969	.08100	.08330	.08681	.09190	.09923	.10997	.12630	.15201	.19127
.30	0.00000	.07889	.11825	.17354	.24027	.30393	.36995	.43356	.50322	.57973	.64539
	.11785	.11844	.12026	.12345	.12825	.13507	.14458	.15760	.17620	.20156	.23481
.40	0.00000	.05684	.11401	.17182	.23058	.29051	.35168	.41385	.47614	.53875	.59239
	.15526	.15598	.15819	.16201	.16770	.17561	.18631	.20050	.21906	.24273	.27160
.50	0.00000	.05445	.10911	.16415	.21970	.27580	.33232	.38885	.44455	.49812	.54793
	.19124	.19205	.19451	.19874	.20494	.21341	.22456	.23884	.25671	.27847	.30400
.60	0.00000	.05187	.10383	.15595	.20824	.26063	.31289	.36458	.41502	.46327	.50828
	.22562	.22647	.22901	.23350	.23993	.24857	.25968	.27355	.29041	.31034	.33319
.70	0.00000	.04918	.09837	.14755	.19667	.24555	.29398	.34153	.38765	.43167	.47288
	.25829	.25917	.26181	.26629	.27271	.28124	.29204	.30525	.32099	.33925	.35987
.80	0.00000	.04649	.09292	.13922	.18529	.23091	.27592	.31988	.36237	.40291	.44097
	.28923	.29010	.29271	.29712	.30341	.31165	.32196	.33441	.34903	.36578	.38450
.90	0.00000	.04384	.08758	.13112	.17431	.21691	.25886	.29967	.33906	.37663	.41201
	.31845	.31929	.32183	.32609	.33213	.34000	.34974	.36138	.37493	.39031	.40739
1.00	0.00000	.04123	.08244	.12335	.16395	.20377	.24287	.28090	.31756	.35256	.38560
	.34198	.34279	.34422	.34729	.35203	.35845	.37560	.38645	.39898	.41312	.42876

$$\frac{U/K+IV/K}{-1}$$

$$U+IV=SN \quad (A+IB)$$

K=SIM 25

B	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
0.00	0.00000 0.00000	.06076 .00000	.12226 .00000	.18228 .00000	.25079 .00000	.32003 .00000	.39480 .00000	.47801 .00000	.57516 .00000	.70031 .00000	1.00000 .00000
.10	0.00000 .04323	.06040 .04348	.12150 .04426	.18406 .04565	.24836 .04778	.31735 .05092	.39077 .05555	.47153 .06266	.56320 .07455	.67114 .09783	.78873 .15123
.20	0.00000 .08596	.05935 .08644	.11932 .08794	.18053 .09057	.24373 .09458	.30975 .10041	.37960 .10880	.45443 .12107	.53510 .13972	.62035 .16905	.70194 .21382
.30	0.00000 .12773	.05770 .12841	.11589 .13049	.17505 .13414	.23569 .13963	.29834 .14744	.36345 .15833	.43125 .17345	.50122 .19452	.57113 .22354	.63617 .26163
.40	0.00000 .16816	.05557 .16398	.11149 .17151	.16808 .17589	.22564 .18240	.28443 .19146	.34450 .20371	.40562 .21998	.46690 .24125	.52650 .26840	.58165 .30153
.50	0.00000 .20695	.05310 .20787	.10662 .21069	.16012 .21553	.21436 .22254	.26917 .23234	.32441 .24511	.37966 .26149	.43407 .28200	.48630 .30780	.53465 .33653
.60	0.00000 .24391	.05042 .24489	.10094 .24786	.15162 .25293	.20248 .26029	.25343 .27018	.30424 .28292	.35445 .29882	.40336 .31818	.44999 .34109	.49324 .36741
.70	0.00000 .27893	.04764 .27993	.09529 .28294	.14293 .28807	.19048 .29542	.23780 .30518	.28461 .31754	.33050 .33269	.37489 .35075	.41707 .37173	.45628 .39546
.80	0.00000 .31196	.04485 .31295	.08964 .31593	.13430 .32097	.17869 .32815	.22265 .33757	.26588 .34937	.30803 .36362	.34863 .38037	.38714 .39958	.42302 .42109
.90	0.00000 .34302	.04211 .34398	.08413 .34688	.12592 .35174	.16734 .35863	.20813 .36760	.24822 .37872	.28710 .39203	.32445 .40752	.35986 .42512	.39291 .44468
1.00	0.00000 .37216	.03548 .37308	.07883 .37585	.11790 .38048	.15655 .38702	.19456 .39548	.23169 .40589	.26768 .41826	.30221 .43254	.33494 .44868	.36555 .46652

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 30$$

B	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
0.00	0.00000 0.00000	.05944 .00000	.11965 .00000	.18144 .00000	.24581 .00000	.31406 .00000	.38806 .00000	.47082 .00000	.56807 .00000	.69432 .00000	1.00000 .00000
.10	0.00000 .04627	.05907 .04656	.11887 .04745	.18017 .04902	.24392 .05145	.31127 .05501	.38387 .06028	.46409 .06837	.55574 .08189	.66416 .10830	.78294 .16874
.20	0.00000 .09193	.05798 .09253	.11660 .09423	.17651 .09722	.23848 .10178	.30333 .10841	.37226 .11795	.44632 .13192	.52647 .15314	.61146 .18653	.69286 .23752
.30	0.00000 .13650	.05627 .13737	.11304 .13974	.17082 .14388	.23013 .15011	.29152 .15899	.35546 .17138	.42220 .18660	.49120 .21260	.56018 .24571	.62418 .28925
.40	0.00000 .17970	.05407 .18064	.10848 .18350	.16359 .18847	.21971 .19585	.27707 .20615	.33576 .22008	.39553 .23859	.45544 .26284	.51360 .29383	.56711 .33187
.50	0.00000 .22095	.05151 .22199	.10323 .22518	.15535 .23067	.20801 .23872	.26124 .24973	.31499 .26423	.36853 .28285	.42124 .30620	.47163 .33471	.51790 .36832
.60	0.00000 .26012	.04874 .26123	.09757 .26458	.14656 .27032	.19771 .27664	.24493 .28964	.29397 .30428	.34235 .32232	.38930 .34431	.43380 .37039	.47465 .40038
.70	0.00000 .29709	.04587 .29522	.09174 .30162	.13758 .30740	.18332 .31570	.22877 .32673	.27366 .34070	.31754 .35783	.35978 .37829	.39961 .40207	.43622 .42900
.80	0.00000 .33183	.04300 .33294	.08593 .33630	.12870 .34197	.17118 .35004	.21316 .36066	.25434 .37394	.29434 .39001	.33265 .40890	.36867 .43057	.40182 .45484
.90	0.00000 .36435	.04019 .36543	.08027 .36867	.12010 .37412	.15952 .38135	.19831 .39192	.23620 .40440	.27283 .41933	.30779 .43671	.34063 .45646	.37088 .47839
1.00	0.00000 .39472	.03749 .39575	.07485 .39884	.11190 .40401	.14848 .41131	.18436 .42076	.21929 .43239	.25297 .44620	.28505 .46214	.31517 .48013	.34297 .50000

$$U/K \cdot IV/K' \\ J+IV=SN \quad (A+IB)$$

$$K=\sin 35$$

B	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
0.00	0.00000 0.00000	.05789 .00000	.11657 .00000	.17689 .00000	.23989 .00000	.30691 .00000	.37992 .00000	.46207 .00000	.55933 .00000	.68683 .00000	1.00000 .00000
.10	0.00000 .04904	.05750 .04935	.11576 .05036	.17557 .05214	.23792 .05487	.30401 .05891	.37555 .06488	.45505 .07407	.54646 .08943	.65543 .11942	.77550 .18800
.20	0.00000 .09744	.05638 .09806	.11341 .09997	.17178 .10334	.23227 .10849	.29550 .11594	.36346 .12679	.43650 .14264	.51589 .16676	.60035 .20478	.68120 .26296
.30	0.00000 .14461	.05461 .14548	.10973 .14614	.16588 .15280	.22352 .15933	.28343 .16986	.34598 .18367	.41134 .20338	.47903 .23065	.54665 .26835	.60899 .31809
.40	0.00000 .19008	.05233 .19113	.10502 .19434	.15841 .19593	.21282 .20824	.26850 .21984	.32551 .23556	.38357 .25649	.44171 .28397	.49765 .31918	.54404 .36246
.50	0.00000 .23347	.04970 .23454	.09960 .23821	.14991 .24436	.20074 .25339	.25212 .26575	.30388 .28208	.35554 .30305	.40613 .32942	.45413 .35167	.49759 .39974
.60	0.00000 .27453	.04685 .27576	.09378 .27951	.14086 .28592	.18807 .29523	.23531 .30777	.28229 .32334	.32847 .34419	.37306 .36888	.41491 .39819	.45272 .43192
.70	0.00000 .31314	.04391 .31439	.08781 .31818	.13166 .32461	.17536 .33386	.21872 .34614	.26142 .36172	.30296 .38085	.34268 .40367	.37973 .43021	.41319 .46024
.80	0.00000 .34926	.04098 .35049	.08188 .35421	.12259 .36049	.16296 .36945	.20271 .38122	.24167 .39595	.27926 .41377	.31496 .43471	.34814 .45871	.37814 .48552
.90	0.00000 .38292	.03813 .38411	.07613 .38769	.11385 .39370	.15112 .40222	.18769 .41333	.22324 .42709	.25741 .44354	.28975 .46267	.31976 .48435	.34693 .50837
1.00	0.00000 .41421	.03540 .41534	.07065 .41873	.10557 .42441	.13996 .43242	.17353 .44274	.20618 .45552	.23739 .47063	.26686 .48805	.29421 .50765	.31903 .52921

$$\frac{U/K + IV/K}{-1}$$

$$U + IV = SN \quad (A + iB)$$

$$K = \sin \alpha$$

B	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
0.00	0.00000 0.00000	.05610 .00000	.11301 .00000	.17162 .00000	.23279 .00000	.29354 .00000	.37031 .00000	.45162 .00000	.54875 .00000	.67761 .00000	1.00000 .00000
.10	0.00000 .05154	.05570 .05191	.11217 .05303	.17026 .05501	.23095 .05800	.29553 .06253	.36576 .06937	.44427 .07978	.53525 .09725	.64464 .13143	.76590 .20966
.20	0.00000 .10237	.05454 .10306	.10975 .10520	.16634 .10997	.22511 .11474	.28700 .12116	.35316 .13534	.42468 .15228	.50317 .18067	.58671 .22400	.66638 .29059
.30	0.00000 .15184	.05272 .15280	.10597 .15577	.16020 .16097	.21616 .16833	.27424 .18007	.33499 .19582	.39864 .21733	.46459 .24868	.53027 .29150	.59011 .34823
.40	0.00000 .19939	.05039 .20056	.10113 .20414	.15558 .21035	.20505 .21957	.25877 .23258	.31380 .25017	.36980 .27367	.42570 .30459	.47930 .34433	.52722 .39326
.50	0.00000 .24484	.04769 .24594	.09559 .24990	.14387 .25672	.19265 .26675	.24153 .28051	.29151 .29668	.34085 .32208	.38988 .35154	.43534 .38761	.47387 .43019
.60	0.00000 .28732	.04479 .28068	.08965 .29262	.13463 .29990	.17971 .31018	.22473 .32405	.26939 .34195	.31310 .36439	.35495 .39175	.39370 .42421	.42793 .46149
.70	0.00000 .32728	.04181 .32066	.08355 .33282	.12529 .33989	.16679 .35005	.20787 .36356	.24817 .38070	.28715 .40172	.32406 .42680	.35801 .45590	.38797 .48870
.80	0.00000 .36452	.03885 .36586	.07560 .36993	.11613 .37679	.15426 .38658	.1917 .39944	.22822 .41553	.26322 .43497	.29614 .45777	.32630 .48383	.35297 .51281
.90	0.00000 .39907	.03598 .40056	.07102 .40425	.10735 .41078	.14237 .42004	.17661 .43209	.20974 .44701	.24136 .46582	.27098 .48547	.29808 .50880	.32213 .53450
1.00	0.00000 .43104	.03326 .43226	.06635 .43592	.09108 .44206	.11312 .45059	.13124 .46186	.15277 .47593	.22149 .49181	.24234 .51046	.27291 .53136	.29482 .55423

$$\frac{U/K+IV/K'}{J+IV+SN^{-1}} (A+IB)$$

$$K=\sin 45$$

	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
0	0.00000 0.00000	.05407 .00000	.10497 .00000	.15561 .00000	.22510 .00000	.28889 .00000	.35913 .00000	.43930 .00000	.53607 .00000	.5661 .00000	1.00000 .00000
.10	0.00000 .05300	.05366 .05420	.10811 .05544	.16422 .05765	.22299 .06107	.28577 .06616	.35438 .07374	.43160 .08551	.52184 .10539	.63143 .14450	.75375 .23443
.20	0.00000 .10581	.05240 .10758	.10564 .10994	.16019 .11412	.21698 .12054	.27695 .12994	.34129 .14359	.41134 .15381	.48811 .19486	.57015 .24426	.64769 .32068
.30	0.00000 .15831	.05062 .15938	.10177 .16766	.15398 .16841	.23780 .17712	.26381 .18962	.32249 .20719	.38405 .23186	.44777 .26659	.51082 .31501	.56708 .37938
.40	0.00000 .20771	.04825 .20899	.09663 .21293	.14014 .21378	.19643 .23000	.24794 .24435	.30069 .26386	.35426 .29000	.40747 .32450	.45786 .36690	.50168 .42358
.50	0.00000 .25457	.04552 .25599	.09122 .26033	.13729 .26781	.18382 .27882	.23073 .29395	.27793 .31397	.32464 .35979	.36973 .37231	.41138 .41310	.44719 .45693
.60	0.00000 .29861	.04259 .30309	.08523 .30461	.12796 .31233	.17073 .32356	.21337 .33671	.25551 .35029	.29650 .38281	.33535 .41270	.37072 .44806	.40104 .48846
.70	0.00000 .33970	.03959 .34119	.07814 .34570	.11858 .35337	.15775 .36440	.19641 .37905	.23417 .39764	.27044 .42042	.30441 .44753	.33511 .47896	.36148 .51396
.80	0.00000 .37782	.03664 .37827	.07316 .38366	.10945 .39106	.14524 .40154	.18033 .41546	.21430 .43278	.24664 .45365	.27673 .47807	.30384 .50583	.32724 .53651
.90	0.00000 .41305	.03400 .41443	.06743 .41660	.10072 .42561	.13345 .43551	.16534 .44841	.19683 .46434	.22509 .48331	.25202 .50522	.27629 .52985	.29738 .55680
1.00	0.00000 .44551	.03111 .44681	.06203 .45072	.09257 .45725	.12249 .46643	.15153 .47830	.17937 .49284	.20565 .50999	.22998 .52963	.25193 .55152	.27115 .57532

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 50$$

B	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
0.00	0.00000 0.00000	.05180 .07000	.10444 .00000	.15085 .00000	.21616 .00000	.27788 .00000	.34624 .00000	.42491 .00000	.52097 .00000	.65247 .00000	1.00000 .00000
.10	0.00000 .05582	.05139 .05326	.10357 .05762	.15743 .06006	.21401 .06384	.27467 .06944	.34132 .07796	.41686 .09122	.50543 .11384	.61524 .15879	.73793 .26311
.20	0.00000 .11077	.05019 .11161	.10106 .11420	.15334 .11680	.20787 .12588	.26563 .13628	.32780 .15148	.39571 .17414	.47048 .20921	.55027 .26547	.62428 .35314
.30	0.00000 .15577	.04851 .16524	.09715 .16847	.14704 .17512	.19854 .18469	.25220 .19846	.30849 .21790	.36755 .24533	.42852 .28413	.48813 .33845	.53966 .41075
.40	0.00000 .21508	.04592 .21647	.09219 .22076	.13913 .22922	.18703 .23940	.23608 .25510	.28656 .27654	.33708 .30532	.38715 .34337	.43377 .39236	.47277 .45245
.50	0.00000 .28331	.04318 .28485	.08655 .28953	.13024 .27767	.17433 .26984	.21878 .30609	.26327 .32769	.30710 .35601	.34697 .39143	.38608 .43465	.41827 .48515
.60	0.00000 .40850	.04026 .31010	.08057 .31497	.12092 .32330	.16125 .33542	.20135 .35177	.24083 .37290	.27895 .39935	.31466 .43151	.34652 .46939	.37292 .51232
.70	0.00000 .50051	.03729 .39211	.07452 .39694	.11160 .36516	.14836 .37690	.18453 .39269	.21967 .41258	.25316 .43691	.28415 .46577	.31163 .49894	.33456 .53579
.80	0.00000 .58933	.03438 .39088	.06862 .39555	.10258 .40344	.13603 .41467	.16869 .42940	.20012 .44778	.22983 .46989	.25714 .49563	.28133 .52474	.30171 .55664
.90	0.00000 .67503	.03159 .42054	.06350 .43096	.09405 .43837	.12449 .44885	.15404 .46245	.18231 .47924	.20889 .49917	.23325 .52209	.25487 .54771	.27328 .57552
1.00	0.00000 .75783	.02897 .45926	.05774 .46337	.08611 .47024	.11383 .47989	.14064 .49233	.16620 .50755	.19015 .52544	.21209 .54583	.23166 .56843	.24848 .59284

$$\frac{U/K + IV/K'}{-1}$$

$$U + IV = SN \quad (A + IB)$$

$$K = \sin 55$$

B	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
0.00	0.00000 0.00000	.04928 .00000	.09941 .00000	.15132 .00000	.20614 .00000	.26544 .00000	.33151 .00000	.40820 .00000	.50305 .00000	.63550 .00000	1.00000 .00000
.10	0.00000 .05760	.04887 .05308	.09854 .05956	.14389 .06222	.20337 .06636	.26217 .07257	.32645 .08198	.39983 .09684	.48717 .12252	.59559 .17435	.71721 .29649
.20	0.00000 .11426	.04767 .11517	.09602 .11799	.14577 .12299	.19776 .13071	.25299 .14213	.31261 .15891	.37800 .18412	.45006 .22350	.52665 .28727	.59537 .38726
.30	0.00000 .16913	.04580 .17039	.09211 .17427	.13345 .18110	.18837 .19150	.23773 .2072	.29297 .22783	.34913 .25203	.40681 .30096	.46235 .36121	.50801 .44112
.40	0.00000 .22152	.04342 .22302	.08717 .22764	.13156 .23570	.17686 .24777	.22323 .26479	.27059 .28807	.31833 .31939	.36493 .36084	.40736 .41409	.44118 .47884
.50	0.00000 .27093	.04071 .27258	.08158 .27762	.12274 .28633	.16424 .29918	.20600 .31687	.24766 .34032	.28843 .37059	.32690 .40863	.36095 .45481	.38795 .50824
.60	0.00000 .31737	.03783 .31878	.07568 .32397	.11355 .33285	.15133 .34578	.18880 .36323	.22551 .38576	.26069 .41392	.29321 .44804	.32163 .48798	.34434 .53278
.70	0.00000 .35982	.03492 .36151	.06976 .36664	.10441 .37536	.13870 .38788	.17232 .40451	.20482 .42554	.23554 .45120	.26361 .48151	.28805 .51612	.30784 .55420
.80	0.00000 .39920	.03208 .40083	.06401 .40575	.09563 .41406	.12670 .42588	.15691 .44137	.18587 .46066	.21300 .48377	.23766 .51058	.25915 .54070	.27683 .57302
.90	0.00000 .43532	.02937 .43686	.05857 .44149	.08737 .44925	.11555 .46021	.14273 .47443	.16873 .49191	.19292 .51260	.21487 .53630	.23409 .56262	.25014 .59099
1.00	0.00000 .46838	.02685 .46981	.05350 .47409	.07973 .48124	.10531 .49128	.12994 .50419	.15332 .51994	.17507 .53841	.19403 .55936	.21224 .58246	.22637 60723

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SH(A+IB)$$

$$K=\sin 60$$

θ	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
0.00	0.00000 0.00000	.04651 .00000	.09385 .00000	.14295 .00000	.19496 .00000	.24144 .00000	.31474 .00000	.38887 .00000	.46160 .00000	.61453 .00000	1.00000 .00000
.10	0.00000 .05915	.04610 .05966	.09298 .06126	.14153 .06412	.19279 .06861	.24815 .07537	.30960 .08573	.38024 .10227	.46512 .13129	.57157 .19106	.68379 .33497
.20	0.00000 .11729	.04491 .11826	.09049 .12129	.13745 .12667	.18660 .13502	.23893 .14741	.29560 .16576	.35791 .19355	.42663 .23738	.49898 .30903	.56054 .42111
.30	0.00000 .17350	.04307 .17485	.08664 .17900	.13120 .18633	.17729 .19752	.22537 .21373	.27591 .23682	.32877 .26970	.38267 .31664	.43348 .36252	.47273 .46906
.40	0.00000 .22706	.04074 .22867	.08478 .23359	.12343 .24219	.16593 .25510	.20940 .27334	.25369 .29833	.29811 .33201	.34097 .37656	.37905 .43352	.40773 .50193
.50	0.00000 .27745	.03809 .27921	.07632 .28455	.11480 .29380	.15357 .30745	.19249 .32627	.23117 .35121	.26876 .38337	.30377 .42367	.33402 .47228	.35694 .52784
.60	0.00000 .32436	.03529 .32610	.07058 .33166	.10386 .34104	.14100 .35466	.17575 .37319	.20963 .39685	.24185 .42647	.27126 .46221	.29641 .50375	.31581 .54985
.70	0.00000 .36772	.03247 .36950	.06486 .37488	.09703 .38403	.12879 .39716	.15984 .41459	.18969 .43658	.21769 .46334	.24296 .49480	.26480 .53048	.28165 .56938
.80	0.00000 .40753	.02974 .40923	.05933 .41437	.08859 .42304	.11728 .43536	.14508 .45148	.17158 .47151	.19622 .49544	.21839 .52317	.23743 .55391	.25276 .58715
.90	0.00000 .44393	.02715 .44553	.05412 .45033	.08070 .45939	.10663 .46975	.13161 .48446	.15529 .50251	.17722 .52380	.19695 .54807	.21403 .57488	.22801 .60358
1.00	0.00000 .47716	.02475 .47863	.04930 .48305	.07344 .49043	.09611 .50076	.11945 .51461	.14074 .53025	.15843 .54914	.17818 .57050	.19355 .59392	.20658 .61890

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+TB)$$

$$K=\sin 65$$

B	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
0.00	0.00000 0.00000	.04345 .00000	.08770 .01000	.13367 .00000	.18249 .00000	.23571 .00000	.29569 .00000	.36654 .00000	.45660 .00000	.58656 .00000	1.00000 .00000
.10	0.00000 .06046	.04305 .06101	.08686 .06271	.13225 .06577	.18036 .07058	.23245 .07789	.29055 .08914	.35777 .10735	.43926 .13908	.55231 .20853	.65349 .37773
.20	0.00000 .11984	.04190 .12068	.08443 .12410	.12841 .12983	.17430 .13875	.22336 .15205	.27662 .17189	.33533 .20210	.39993 .25041	.46700 .32985	.52000 .45370
.30	0.00000 .17719	.04011 .17862	.08069 .18301	.12223 .19079	.16521 .26269	.21309 .21999	.25720 .24473	.30638 .28011	.35609 .33073	.40180 .40160	.43463 .49324
.40	0.00000 .23173	.03780 .23342	.07600 .23861	.11471 .24770	.15419 .26136	.19453 .28068	.23553 .30720	.27643 .34297	.31540 .39021	.34913 .45022	.37310 .52124
.50	0.00000 .28292	.03531 .28476	.07074 .29038	.10639 .30009	.14227 .31445	.17821 .33424	.21379 .36047	.24812 .39425	.27970 .43643	.30634 .40692	.32566 .54391
.60	0.00000 .33047	.03263 .33236	.06525 .33808	.09783 .34789	.13023 .36215	.16219 .38139	.19319 .40617	.22246 .43699	.24886 .47402	.27099 .51675	.28752 .56369
.70	0.00000 .37429	.02995 .37614	.05980 .38174	.08942 .39124	.11861 .40490	.14705 .42293	.17427 .44577	.19962 .47340	.22228 .50575	.24133 .54220	.25599 .58161
.80	0.00000 .41442	.02736 .41619	.05456 .42150	.08142 .43047	.10771 .44320	.13311 .45984	.15720 .48047	.17946 .50503	.19931 .53327	.21613 .56461	.22942 .59816
.90	0.00000 .45103	.02492 .45267	.04965 .45762	.07398 .46592	.09769 .47760	.12045 .49271	.14194 .51120	.15172 .53294	.17938 .55763	.19448 .58476	.20671 .61364
1.00	0.00000 .48436	.02266 .48587	.04512 .49041	.06718 .49757	.08858 .50857	.10909 .52216	.12836 .53865	.14611 .55706	.16281 .57950	.17574 .60314	.18709 .62822

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+18)$$

$$K=\sin 70$$

B	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
0.00	0.00000 0.00000	.04005 .00000	.08088 .00000	.12335 .00000	.16854 .00000	.21798 .00000	.27398 .00000	.34065 .00000	.42656 .00000	.55585 .00000	1.00000 .00000
.10	0.00000 .06153	.03967 .06211	.08008 .06390	.12202 .06713	.16649 .07223	.21482 .08002	.26895 .09210	.33194 .11191	.40888 .14793	.50673 .22592	.60649 .42162
.20	0.00000 .12194	.03858 .12303	.07776 .12641	.11021 .13245	.15067 .14187	.20604 .15600	.25538 .17716	.30981 .20974	.36961 .26206	.43052 .34863	.47452 .48159
.30	0.00000 .18020	.03688 .18170	.07421 .18631	.11242 .19447	.15198 .0699	.19330 .22524	.23265 .25143	.28175 .28899	.32693 .34280	.36739 .41781	.39434 .51220
.40	0.00000 .23553	.03475 .23729	.06976 .24272	.10528 .25221	.14150 .26651	.17846 .28676	.21594 .31459	.25312 .35212	.28813 .40157	.31768 .46395	.33755 .53668
.50	0.00000 .28736	.03234 .28927	.06479 .29512	.09742 .30523	.13022 .32017	.16302 .34078	.19538 .36808	.22639 .40318	.25457 .44883	.27786 .49871	.29410 .55661
.60	0.00000 .33540	.02982 .33735	.05963 .34329	.08937 .35344	.11891 .36822	.14796 .38812	.17604 .41374	.20237 .44551	.22587 .48353	.24524 .52711	.25930 .57456
.70	0.00000 .37958	.02731 .38148	.05452 .38726	.08150 .39707	.10804 .41113	.13333 .42975	.15841 .45316	.18115 .48148	.20130 .51448	.21802 .55147	.23062 .59117
.80	0.00000 .41995	.02490 .42176	.04964 .42723	.07405 .43643	.09789 .44950	.12067 .46655	.14257 .48764	.16253 .51268	.18017 .54136	.19497 .57304	.20649 .60676
.90	0.00000 .45671	.02263 .45839	.04508 .46346	.06715 .47194	.08850 .48387	.10916 .49928	.12849 .51811	.14620 .54019	.16191 .56517	.17523 .59252	.18590 .62149
1.00	0.00000 .49010	.02054 .49165	.04090 .49627	.06086 .50398	.08020 .51477	.09859 .52858	.11601 .54531	.13190 .56476	.14604 .58659	.15818 .61035	.16813 .63547

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 75$$

B	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
0.00	0.00000 0.00000	.03624 .00000	.07321 .00000	.11170 .00000	.15273 .00000	.19774 .00000	.24895 .00000	.31035 .00000	.39041 .00000	.51411 .00000	1.30000 .00000
.10	0.00000 .06237	.03589 .06297	.07246 .06484	.11046 .06820	.15081 .07354	.19477 .08173	.24417 .09454	.30194 .11575	.37294 .15497	.45339 .24197	.54829 .46123
.20	0.00000 .12357	.03487 .12470	.07031 .12821	.10691 .13450	.14537 .14435	.18652 .15914	.23133 .18143	.28079 .21596	.33495 .27179	.38932 .36433	.42461 .50368
.30	0.00000 .18254	.03330 .18409	.06761 .18087	.10153 .19735	.13727 .21037	.17461 .22940	.21375 .25677	.25436 .29613	.29467 .35252	.32990 .43068	.35179 .52841
.40	0.00000 .23847	.03133 .24029	.06290 .24591	.09492 .25573	.12756 .27054	.16084 .29153	.19450 .32041	.22772 .35934	.25869 .41049	.28427 .47455	.30066 .54835
.50	0.00000 .29079	.02911 .29275	.05832 .29878	.08767 .30921	.11716 .32462	.14653 .34587	.17552 .37401	.20310 .41012	.22792 .45488	.24808 .50773	.26165 .56616
.60	0.00000 .33920	.02680 .34121	.05358 .34730	.08028 .35773	.10676 .37290	.13276 .39333	.15780 .41958	.18115 .45208	.20181 .49081	.21861 .53497	.23053 .58270
.70	0.00000 .38364	.02450 .38559	.04890 .39151	.07308 .40154	.09682 .41593	.11985 .43493	.14172 .45884	.15186 .48766	.17956 .52113	.19411 .55847	.20489 .59832
.80	0.00000 .42419	.02230 .42804	.04445 .43161	.06628 .44100	.08758 .45432	.10806 .47167	.12735 .49310	.14499 .51850	.16051 .54748	.17341 .57938	.18335 .61318
.90	0.00000 .46105	.02024 .46276	.04030 .46741	.06001 .47653	.07915 .48866	.09745 .50439	.11460 .52337	.13027 .54569	.14408 .57067	.15573 .59835	.16437 .62735
1.00	0.00000 .49448	.01834 .49605	.03651 .50074	.05431 .50856	.07125 .51948	.08797 .53346	.10334 .55036	.11739 .56497	.12984 .59193	.14048 .61577	.14913 .64089

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 80$$

B	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
0.00	0.00000 0.00000	.03182 .00600	.06428 .00000	.09811 .00000	.13422 .00000	.17392 .00000	.21923 .00000	.27384 .00000	.34576 .00000	.45945 .00000	1.00000 .00000
.10	0.00000 .06297	.03150 .06355	.06361 .06551	.09593 .06998	.13249 .07449	.17123 .08293	.21497 .09635	.26609 .11867	.32933 .16049	.40980 .25510	.47875 .49146
.20	0.00000 .12473	.03059 .12590	.06168 .12951	.09381 .13598	.12750 .14614	.16373 .16144	.20322 .18458	.24676 .22061	.29427 .27912	.34085 .37609	.36912 .51937
.30	0.00000 .18423	.02919 .18560	.05874 .19071	.08900 .19941	.12034 .21281	.15301 .23242	.18738 .26067	.22287 .30135	.25784 .35963	.28781 .43937	.30541 .53905
.40	0.00000 .24056	.02743 .24243	.05507 .24810	.08310 .25425	.11167 .27343	.14077 .29497	.17015 .32460	.19903 .36454	.22574 .41689	.24743 .48209	.26083 .55647
.50	0.00000 .29222	.02548 .29524	.05100 .30139	.07666 .31204	.10241 .32779	.12808 .34951	.15326 .37825	.17716 .41508	.19851 .45059	.21562 .51407	.22689 .57279
.60	0.00000 .34190	.02361 .34394	.04679 .35015	.07010 .36078	.09319 .37623	.11582 .39701	.13757 .42373	.15770 .45672	.17552 .49564	.19331 .54047	.19979 .58835
.70	0.00000 .38852	.02137 .38850	.04266 .39451	.06373 .40471	.08440 .41932	.10447 .43863	.12334 .46285	.14078 .49201	.15600 .52579	.16840 .56335	.17750 .60329
.80	0.00000 .42718	.01943 .42905	.03873 .43471	.05773 .44423	.07625 .45772	.09403 .47527	.11074 .49695	.12598 .52258	.13932 .55177	.15035 .58360	.15878 .61764
.90	0.00000 .46410	.01761 .46584	.03508 .47105	.05222 .47977	.06844 .49203	.08471 .50787	.09956 .52706	.11308 .54953	.12497 .57485	.13495 .61241	.14282 .63142
1.00	0.00000 .49756	.01595 .49914	.03174 .50388	.04721 .51177	.06217 .52279	.07641 .53689	.08970 .55390	.10183 .57361	.11255 .59566	.12167 .61954	.12906 .64465

$$U/K + IV/K + \frac{-1}{U + IV = SN} (A + IB)$$

$$K = \sin 0.5$$

B	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
0.00	0.00000 0.00000	.02418 .00000	.05291 .00000	.08077 .00000	.11054 .00000	.14330 .00000	.18078 .00000	.22610 .00000	.28616 .00000	.38262 .00000	1.00000 .00000
.10	0.00000 .06333	.02592 .06396	.05235 .06591	.07384 .06945	.10909 .07507	.14104 .08376	.17710 .09747	.21952 .12050	.27202 .16403	.33870 .26373	.39191 .50981
.20	0.00000 .12543	.02517 .12661	.05075 .13029	.07719 .13688	.10501 .14722	.13481 .16284	.16732 .18652	.20321 .22347	.24227 .28368	.28009 .38335	.30180 .52866
.30	0.00000 .18521	.02400 .18683	.04829 .19181	.07318 .20066	.09836 .21428	.12589 .23424	.15408 .26304	.18320 .30453	.21175 .36395	.23592 .44556	.24960 .54532
.40	0.00000 .24182	.02254 .24372	.04525 .24955	.06828 .25976	.09174 .27517	.11563 .29704	.13973 .32713	.16336 .36768	.18509 .42074	.20256 .48558	.21310 .56126
.50	0.00000 .29468	.02091 .29672	.04187 .30295	.06293 .31374	.08406 .32970	.10511 .35169	.12572 .38079	.14523 .41804	.16258 .46399	.17637 .51783	.18532 .57669
.60	0.00000 .34351	.01921 .34557	.03839 .35185	.05750 .36260	.07643 .37822	.09496 .39924	.11274 .42621	.12921 .45950	.14363 .49899	.15517 .54372	.16315 .59168
.70	0.00000 .38823	.01752 .39024	.03497 .39631	.05223 .40660	.06917 .42135	.08554 .44082	.10103 .46523	.11522 .49460	.12758 .52856	.13761 .56624	.14492 .60620
.80	0.00000 .42896	.01592 .43085	.03173 .43655	.04729 .44615	.06245 .45974	.07698 .47744	.09062 .49924	.10304 .52500	.11388 .55431	.12282 .58641	.12960 .62025
.90	0.00000 .46592	.01442 .46767	.02872 .47292	.04274 .48170	.05634 .49403	.06930 .50991	.08142 .52925	.09244 .55181	.10211 .57720	.11020 .60480	.11655 .63381
1.00	0.00000 .49939	.01305 .50098	.02597 .50575	.03962 .51368	.05085 .52476	.06248 .53891	.07333 .55599	.08320 .57577	.09192 .59785	.09933 .62176	.10531 .64685

$$U/K+IV/K' \\ -1 \\ U+IV=SN (A+IB)$$

$$K=\sin 86$$

B	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
0.00	0.00000 0.00000 0.00000	.02476 .00000 .00000	.05002 .00000 .00000	.07637 .00000 .00000	.10452 .00000 .00000	.13550 .00000 .00000	.17096 .00000 .00000	.21365 .00000 .00000	.27074 .00000 .00000	.36229 .00000 .00000	1.00000 .00000 .00000
.10	0.00000 .06337	.02451 .06400	.04949 .06596	.07549 .06950	.10315 .07514	.13337 .08386	.16748 .09760	.20761 .12072	.25730 .16447	.32039 .26480	.37026 .51201
.20	0.00000 .12552	.02379 .12670	.04793 .13038	.07298 .13698	.09928 .14735	.12746 .16301	.15821 .18675	.19214 .22382	.22906 .28423	.26476 .38423	.28511 .52976
.30	0.00000 .18533	.02269 .18695	.04566 .19194	.06918 .20081	.09355 .21446	.11901 .23446	.14566 .26332	.17310 .30492	.20015 .36447	.22294 .44624	.23578 .54607
.40	0.00000 .24197	.02131 .24387	.04277 .24971	.06454 .25994	.08672 .27538	.10930 .29729	.13207 .32744	.15440 .36805	.17491 .42120	.19139 .48711	.20130 .56182
.50	0.00000 .29486	.01976 .29690	.03958 .30314	.05948 .31394	.07945 .32992	.09934 .35195	.11882 .38109	.13725 .41840	.15362 .46440	.16663 .51828	.17505 .57716
.60	0.00000 .34370	.01815 .34577	.03628 .35205	.05434 .36281	.07223 .37846	.08974 .39951	.10654 .42651	.12209 .45983	.13570 .49935	.14659 .54411	.15411 .59207
.70	0.00000 .38844	.01656 .39044	.03305 .39652	.04936 .40682	.06536 .42159	.08083 .44108	.09546 .46552	.10886 .49490	.12053 .52889	.12999 .56658	.13688 .60655
.80	0.00000 .42917	.01504 .43107	.02998 .43678	.04468 .44638	.05900 .45999	.07274 .47764	.08562 .49951	.09735 .52529	.10758 .55461	.11601 .58672	.12241 .62057
.90	0.00000 .46614	.01363 .46789	.02713 .47314	.04038 .48193	.05323 .49427	.06548 .51016	.07693 .52951	.08733 .55209	.09646 .57748	.10409 .60508	.11099 .63409
1.00	0.00000 .49961	.01233 .50120	.02454 .50597	.03649 .51391	.04804 .52499	.05902 .53915	.06927 .55624	.07860 .57602	.08683 .59812	.09382 .62202	.09946 .64712

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (1+'B)$$

K=SN 87

B	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
0.00	0.00000 0.00000	.02313 .00000	.04673 .00000	.07134 .00000	.09704 .00000	.12657 .00000	.15972 .00000	.19982 .00000	.25304 .00000	.33881 .00000	1.00000 .00000
.10	0.00000 .06341	.02289 .06404	.04623 .06600	.07051 .06955	.09635 .07520	.12454 .08393	.15646 .09771	.19397 .12089	.24043 .16481	.29940 .26555	.34565 .51371
.20	0.00000 .12558	.02222 .12677	.04481 .13045	.06817 .13707	.09274 .14745	.11907 .16314	.14779 .18693	.17949 .22409	.21397 .28467	.24727 .38492	.26515 .53062
.30	0.00000 .18543	.02119 .18704	.04264 .19205	.06462 .20092	.08738 .21460	.11116 .23463	.13605 .26354	.16175 .30521	.18693 .36488	.20817 .44676	.22010 .54655
.40	0.00000 .24209	.01990 .24399	.03995 .24984	.06028 .26008	.08099 .27554	.10208 .29748	.12335 .32767	.14418 .36835	.16333 .42156	.17869 .48753	.18790 .56227
.50	0.00000 .29499	.01845 .29704	.03696 .30329	.05555 .31410	.07420 .33010	.09277 .35215	.11095 .38133	.12816 .41868	.14343 .46472	.15556 .51863	.16340 .57752
.60	0.00000 .34385	.01695 .34592	.03388 .35221	.05075 .36298	.06745 .37864	.08380 .39971	.09948 .42674	.11399 .46009	.12669 .49864	.13685 .54441	.14385 .59238
.70	0.00000 .38860	.01546 .39060	.03086 .39669	.04609 .40700	.06103 .42178	.07547 .44124	.08913 .46574	.10163 .49514	.11252 .52914	.12135 .56685	.12777 .60682
.80	0.00000 .42934	.01405 .43123	.02799 .43695	.04172 .44656	.05509 .46017	.06791 .47789	.07994 .49973	.09088 .52552	.10043 .55484	.10829 .58696	.11426 .62081
.90	0.00000 .46631	.01272 .46805	.02533 .47331	.03770 .48210	.04969 .49446	.06113 .51036	.07131 .52971	.08153 .55230	.09094 .57770	.09716 .60530	.10275 .63432
1.00	0.00000 .49978	.01151 .50137	.02291 .50614	.03407 .51409	.04485 .52518	.05510 .53934	.06467 .55644	.07337 .57522	.08105 .59032	.08757 .62223	.09283 .64732

$$\frac{U/K+IV/K}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin \theta$$

B	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
0.00	0.00000 0.00000	.02116 .00000	.04275 .00000	.06526 .00000	.08932 .00000	.11581 .00000	.14613 .00000	.18264 .00000	.23157 .00000	.31021 .00000	1.00000 .00000
.10	0.00000 .06343	.02094 .06406	.04229 .06603	.06451 .06958	.08815 .07524	.11399 .08394	.14315 .09779	.17747 .12102	.22000 .16505	.27396 .26625	.31607 .51493
.20	0.00000 .12583	.02033 .12682	.04100 .13051	.06236 .13713	.08494 .14753	.10891 .16324	.13520 .18706	.16421 .22429	.19575 .28498	.22618 .38541	.24336 .53124
.30	0.00000 .18549	.01938 .16711	.03901 .19212	.05711 .20101	.07933 .21470	.10164 .23476	.12445 .26370	.14796 .30543	.17098 .36517	.19038 .44713	.20125 .54706
.40	0.00000 .24217	.01820 .24407	.03654 .24993	.05514 .26018	.07409 .27566	.09337 .29762	.11282 .32784	.13188 .36856	.14938 .42182	.16340 .48783	.17181 .56258
.50	0.00000 .29509	.01688 .29714	.03381 .30339	.05081 .31422	.06787 .33023	.08481 .35230	.10148 .38150	.11721 .41887	.13117 .46495	.14225 .51886	.14941 .57777
.60	0.00000 .34396	.01550 .34603	.03099 .35233	.04641 .36311	.06169 .37878	.07664 .39986	.09096 .42690	.10425 .46027	.11586 .49984	.12513 .54462	.13153 .59260
.70	0.00000 .38871	.01414 .39072	.02822 .39681	.04215 .40713	.05591 .42191	.06902 .44143	.08151 .46590	.09294 .49332	.10289 .52933	.11096 .57004	.11682 .60701
.80	0.00000 .42946	.01284 .43135	.02560 .43707	.03916 .44668	.05038 .46031	.06210 .47804	.07310 .49988	.08310 .52568	.09183 .55501	.09902 .58713	.10447 .62098
.90	0.00000 .46843	.01164 .46819	.02317 .47344	.03448 .48223	.04544 .49459	.05590 .51050	.06567 .52996	.07455 .55245	.08233 .57785	.08884 .60546	.09394 .63447
1.00	0.00000 .49990	.01053 .50169	.02095 .50627	.03115 .51421	.04101 .52531	.05034 .53943	.05913 .55658	.06709 .57637	.07411 .59487	.08007 .62237	.08488 .64747

$$\frac{U/K+IV/K}{-1}$$

$$I+IV=SN \quad (A+IB)$$

$$K=\sin \theta_9$$

B	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
0.00	0.00000 0.00000	.01846 .00000	.03730 .00000	.05695 .00000	.07795 .00000	.10107 .00000	.12753 .00000	.15957 .00000	.20212 .00000	.27084 .00000	1.00000 .00000
.10	0.00000 .06345	.01828 .06408	.03691 .06604	.05629 .06460	.07632 .07526	.09947 .08401	.12492 .09783	.15489 .12109	.19201 .16520	.23911 .26662	.27574 .51566
.20	0.00000 .12566	.01774 .12684	.03577 .13054	.05442 .13716	.07403 .14757	.09505 .16329	.11798 .18714	.14330 .22440	.17082 .28516	.19736 .36570	.21231 .53160
.30	0.00000 .18553	.01692 .18715	.03404 .19216	.05158 .20106	.06975 .21476	.08873 .23483	.10860 .26380	.12911 .30556	.14919 .36534	.16611 .44736	.17557 .54731
.40	0.00000 .24222	.01588 .24413	.03188 .24998	.04811 .26024	.06455 .27573	.08143 .29770	.09844 .32795	.11507 .36808	.13033 .42197	.14259 .48801	.14988 .56277
.50	0.00000 .29515	.01473 .29719	.02950 .30345	.04433 .31428	.05922 .33030	.07404 .35239	.08854 .38160	.10226 .41899	.11444 .46500	.12410 .51903	.13034 .57793
.60	0.00000 .34402	.01353 .34609	.02704 .35239	.04050 .36318	.05382 .37885	.06687 .39995	.07938 .42700	.09095 .46038	.10108 .49996	.10917 .54475	.11474 .59273
.70	0.00000 .38878	.01234 .39079	.02462 .39688	.03678 .40720	.04870 .42199	.06022 .44152	.07112 .46599	.08108 .49542	.08976 .52944	.09680 .56716	.10191 .60713
.80	0.00000 .42953	.01121 .43143	.02233 .43714	.03329 .44676	.04396 .46039	.05418 .47812	.06377 .49997	.07250 .52577	.08011 .55511	.08638 .58724	.09113 .62108
.90	0.00000 .46650	.01015 .46825	.02021 .47351	.03008 .48231	.03965 .49467	.04877 .51058	.05729 .52994	.06533 .55254	.07182 .57795	.07750 .60556	.08195 .63457
1.00	0.00000 .49998	.00919 .50157	.01828 .50634	.02718 .51429	.03578 .52538	.04396 .53956	.05159 .55666	.05853 .57645	.06465 .59855	.06985 .62246	.07404 .64755

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 5$$

B	A = .90	A = .91	A = .92	A = .93	A = .94	A = .95	A = .96	A = .97	A = .98	A = .99	A = 1.00
0.00	.71339 .00000	.72338 .00000	.74319 .00000	.75997 .00000	.77736 .00000	.79747 .00000	.81900 .00000	.84338 .00000	.87223 .00000	.90972 .00000	1.00000 .00000
.01	.71205 .00600	.72697 .00631	.74270 .00667	.75938 .00711	.77721 .00765	.79643 .00835	.81764 .00928	.84130 .01063	.86854 .01279	.90085 .01691	.93627 .02622
.02	.71102 .01195	.72577 .01255	.74127 .01326	.75764 .01411	.77504 .01515	.79368 .01645	.81381 .01819	.83575 .02055	.85971 .02398	.88528 .02923	.90994 .03711
.03	.70936 .01783	.72383 .01870	.73898 .01972	.75488 .02093	.77164 .02239	.78931 .02419	.80819 .02648	.82810 .02945	.84894 .03340	.87000 .03868	.89279 .04548
.04	.70710 .02359	.72123 .02470	.73593 .02599	.75126 .02749	.76727 .02929	.78399 .03145	.80142 .03410	.81945 .03738	.83780 .04147	.85588 .04653	.87285 .05256
.05	.70433 .02921	.71806 .03052	.73226 .03204	.74696 .03378	.76217 .03582	.77788 .03823	.79402 .04109	.81044 .04450	.82687 .04857	.84288 .05334	.85796 .05881
.06	.70112 .03467	.71441 .03616	.72808 .03785	.74214 .03978	.75657 .04200	.77132 .04456	.78632 .04753	.80140 .05097	.81633 .05493	.83082 .05945	.84453 .06448
.07	.69753 .03997	.71037 .04160	.72352 .04343	.73695 .04549	.75063 .04783	.76452 .05048	.77851 .05349	.79248 .05690	.80623 .06075	.81956 .06502	.83221 .06979
.08	.69364 .04509	.70603 .04683	.71866 .04877	.73149 .05193	.74449 .05334	.75760 .05604	.77073 .05906	.78377 .06241	.79656 .06612	.80896 .07018	.82073 .07457
.09	.68950 .05005	.70146 .05188	.71359 .05389	.72586 .05611	.73824 .05857	.75066 .06129	.76304 .06428	.77529 .06756	.78730 .07114	.79893 .07501	.81007 .07915
.10	.68517 .05484	.69671 .05873	.70837 .06080	.72013 .06107	.73194 .06354	.74375 .06621	.75548 .06920	.76706 .07241	.77840 .07586	.78940 .07956	.79997 .08350

$$\frac{U/K + IV/K'}{-1}$$

$$U + IV = SN \quad (A + iB)$$

$$K = \sin 10$$

B	A = .90	A = .91	A = .92	A = .93	A = .94	A = .95	A = .96	A = .97	A = .98	A = .99	A = 1.00
0.00	.71095 .00000	.72599 .00000	.74186 .00000	.75871 .00000	.77678 .00000	.79634 .00000	.81801 .00000	.84251 .00000	.87151 .00000	.90321 .00000	1.00000 .00000
.01	.71060 .00736	.72558 .00773	.74137 .00818	.75812 .00872	.77633 .00939	.79537 .01025	.81604 .01140	.84042 .01306	.86779 .01572	.90028 .02078	.93583 .03222
.02	.70957 .01466	.72437 .01540	.73993 .01627	.75637 .01732	.77384 .01860	.79255 .02021	.81279 .02233	.83483 .02524	.85891 .02946	.88462 .03591	.90941 .04561
.03	.70789 .02186	.72242 .02294	.73762 .02419	.75358 .02568	.77042 .02748	.78823 .02973	.80712 .03251	.82713 .03617	.84807 .04103	.86923 .04753	.88913 .05590
.04	.70562 .02893	.71980 .03030	.73455 .03188	.74994 .03374	.76601 .03595	.78280 .03861	.80031 .04187	.81843 .04591	.83686 .05094	.85503 .05716	.87207 .06459
.05	.70283 .03582	.71660 .03744	.73085 .03930	.74560 .04145	.76037 .04397	.77667 .04693	.79246 .05045	.80935 .05465	.82545 .05965	.84154 .06553	.85706 .07226
.06	.69959 .04251	.71292 .04435	.72664 .04643	.74075 .04881	.75523 .05154	.77004 .05470	.78510 .05835	.80024 .06259	.81524 .06747	.82979 .07302	.84356 .07922
.07	.69597 .04901	.70885 .05102	.72203 .05327	.73554 .05582	.74925 .05869	.76313 .06195	.77724 .06567	.79126 .06987	.80507 .07460	.81844 .07986	.83125 .08552
.08	.69204 .05529	.70447 .05744	.71714 .05982	.73001 .06248	.74306 .06546	.75622 .06873	.76939 .07249	.78248 .07663	.79532 .08119	.80776 .08619	.81963 .09160
.09	.68787 .06136	.69985 .06362	.71203 .06610	.72434 .06884	.73675 .07197	.74922 .07521	.76164 .07890	.77394 .08294	.78598 .08735	.79766 .09212	.80864 .09722
.10	.68350 .06724	.69507 .06957	.70677 .07212	.71856 .07491	.73040 .07797	.74225 .08139	.75402 .08494	.76564 .08889	.77702 .09314	.78805 .09771	.79865 .10255

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 15$$

B	A = .90	A = .91	A = .92	A = .93	A = .94	A = .95	A = .96	A = .97	A = .98	A = .99	A = 1.00
0.00	.70850 .00000	.72364 .00000	.73861 .00000	.75358 .00000	.76847 .00000	.78327 .00000	.79794 .00000	.81246 .00000	.82684 .00000	.84107 .00000	1.00000 .00000
.01	.70815 .00851	.72322 .00895	.73811 .00947	.75297 .01010	.76770 .01088	.78231 .01169	.79679 .01259	.81114 .01355	.82537 .01456	.83947 .01562	.85343 .01673
.02	.70710 .01696	.72200 .01783	.73666 .01884	.75120 .02006	.76561 .02155	.78000 .02323	.79427 .02509	.80842 .02709	.82246 .02927	.83639 .03155	.85021 .03398
.03	.70540 .02530	.72002 .02655	.73432 .02801	.74847 .02974	.76247 .03184	.77634 .03422	.79009 .03689	.80373 .03984	.81726 .04309	.83068 .04664	.84400 .05059
.04	.70310 .03347	.71736 .03506	.73120 .03691	.74484 .03908	.75827 .04165	.77150 .04472	.78462 .04854	.79763 .05324	.81054 .05825	.82335 .06364	.83607 .06949
.05	.70027 .04144	.71412 .04333	.72765 .04550	.74097 .04801	.75409 .05093	.76702 .05439	.77976 .05849	.79231 .06338	.80476 .06920	.81711 .07544	.82935 .08219
.06	.69698 .04918	.71039 .05132	.72349 .05375	.73638 .05652	.74907 .05970	.76156 .06339	.77395 .06764	.78624 .07257	.79843 .07825	.81052 .08472	.82251 .09193
.07	.69332 .05669	.70626 .05903	.71892 .06166	.73137 .06463	.74362 .06798	.75576 .07172	.76780 .07611	.77974 .08101	.79158 .08652	.80332 .09274	.81496 .09935
.08	.68933 .06395	.70182 .06645	.71415 .06924	.72632 .07234	.73835 .07581	.75026 .07969	.76206 .08401	.77375 .08883	.78534 .09415	.79683 .10000	.80822 .10627
.09	.68510 .07097	.69715 .07360	.70907 .07650	.72087 .07969	.73256 .08323	.74414 .08712	.75562 .09142	.76700 .09613	.77828 .10127	.78946 .10683	.80054 .11276
.10	.68067 .07775	.69222 .08043	.70364 .08346	.71495 .08671	.72616 .09028	.73727 .09417	.74828 .09841	.75919 .10301	.76999 .10796	.78069 .11330	.79129 .11895

$$\frac{U+IV}{K} = \frac{IV}{K} + \frac{U}{K}$$

$$-1$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 20$$

B	A = .90	A = .91	A = .92	A = .93	A = .94	A = .95	A = .96	A = .97	A = .98	A = .99	A = 1.00
0.00	.70499 .00000	.72025 .00000	.73537 .00000	.75030 .00000	.76499 .00000	.77959 .00000	.79405 .00000	.80830 .00000	.82233 .00000	.83615 .00000	.85000 .00000
.01	.70463 .00962	.71983 .01012	.73586 .01071	.75289 .01143	.76911 .01232	.78449 .01345	.80000 .01498	.81565 .01675	.83145 .01870	.84730 .02085	.86320 .02310
.02	.70356 .01916	.71858 .02015	.73428 .02130	.75000 .02269	.76586 .02439	.78186 .02654	.79800 .02935	.81425 .03310	.83060 .03870	.84705 .04732	.86360 .05814
.03	.70183 .02857	.71656 .03000	.73200 .03167	.74822 .03365	.76466 .03604	.78130 .03899	.79810 .04272	.81500 .04756	.83200 .05400	.84910 .06261	.86630 .07330
.04	.69948 .03780	.71386 .03982	.72883 .04173	.74445 .04420	.76079 .04714	.77787 .05067	.79569 .05560	.81414 .06036	.83293 .06703	.85145 .07527	.86983 .08511
.05	.69659 .04680	.71055 .04896	.72500 .05144	.73998 .05430	.75549 .05764	.77153 .06154	.78801 .06625	.80480 .07183	.82160 .07847	.83799 .08626	.85341 .09519
.06	.69324 .05554	.70675 .05799	.72065 .06076	.73497 .06392	.74957 .06756	.76472 .07175	.78002 .07661	.79541 .08224	.81067 .08872	.82548 .09609	.83949 .10431
.07	.68950 .06401	.70254 .06609	.71590 .06969	.72956 .07308	.74349 .07691	.75764 .08122	.77191 .08619	.78615 .09178	.80019 .09806	.81379 .10505	.82671 .11271
.08	.68543 .07220	.69801 .07507	.71083 .07825	.72388 .08179	.73710 .08575	.75044 .09018	.76381 .09512	.77710 .10062	.79014 .10670	.80277 .11335	.81482 .12053
.09	.68111 .08012	.69324 .08312	.70554 .08644	.71801 .09009	.73058 .09413	.74321 .09854	.75581 .10349	.76827 .10888	.78049 .11475	.79234 .12109	.80368 .12789
.10	.67658 .08776	.68827 .09088	.70010 .09429	.71202 .09801	.72401 .10209	.73600 .10653	.74792 .11138	.75970 .11664	.77122 .12232	.78241 .12839	.79315 .13485

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN' (A+IB)$$

$$K=\sin 25$$

B	A = .90	A = .91	A = .92	A = .93	A = .94	A = .95	A = .96	A = .97	A = .98	A = .99	A = 1.00
0.00	.70031 .00000	.71574 .00000	.73204 .00000	.74939 .00000	.76682 .00000	.78427 .00000	.80165 .00000	.81904 .00000	.83614 .00000	.85336 .00000	1.00000 .00000
.01	.69994 .01073	.71531 .01130	.73153 .01197	.74676 .01276	.76233 .01379	.78723 .01507	.80920 .01680	.83384 .01927	.86226 .02324	.89603 .03077	.93310 .04780
.02	.69884 .02138	.71403 .02250	.73001 .02361	.74592 .02538	.76432 .02730	.78424 .02973	.80516 .03289	.82798 .03724	.85295 .04353	.87964 .05316	.90539 .06760
.03	.69706 .03188	.71196 .03350	.72756 .03539	.74398 .03763	.76134 .04033	.77968 .04366	.79920 .04787	.81990 .05334	.84158 .06061	.86351 .07031	.88415 .08260
.04	.69465 .04218	.70918 .04424	.72432 .04663	.74013 .04943	.75666 .05274	.77395 .05674	.79203 .06153	.81074 .06768	.82980 .07521	.84860 .08451	.86624 .09562
.05	.69169 .05221	.70579 .05466	.72040 .05747	.73554 .06071	.75124 .06449	.76747 .06865	.78417 .07422	.80118 .08053	.81822 .08802	.83483 .09683	.85048 .10691
.06	.68825 .06195	.70189 .06473	.71594 .06787	.73040 .07145	.74527 .07557	.76050 .08031	.77598 .08581	.79158 .09217	.80703 .09949	.82204 .10783	.83623 .11712
.07	.68441 .07139	.69757 .07443	.71105 .07783	.72486 .08167	.73894 .08601	.75325 .09093	.76768 .09652	.78209 .10284	.79630 .10995	.81006 .11785	.82314 .12651
.08	.68023 .08051	.69292 .08376	.70586 .08737	.71902 .09139	.73238 .09598	.74586 .10083	.75938 .10649	.77281 .11271	.78599 .11959	.79877 .12712	.81096 .13525
.09	.67579 .08932	.68804 .09274	.70043 .09650	.71300 .10064	.72569 .10522	.73844 .11027	.75115 .11583	.76376 .12193	.77619 .12858	.78807 .13577	.79953 .14346
.10	.67114 .09763	.68291 .10137	.69483 .10524	.70686 .10946	.71894 .11408	.73104 .11913	.74307 .12462	.75496 .13059	.76659 .13702	.77788 .14391	.78873 .15123

$$\frac{U/K + IV/K'}{2}$$

$$U + IV = SN \quad (A + IB)$$

$$K = \sin 30$$

B	A = .90	A = .91	A = .92	A = .93	A = .94	A = .95	A = .96	A = .97	A = .98	A = .99	A = 1.00
0.00	.69432 .00000	.70995 .00000	.72650 .00000	.74412 .00000	.76305 .00000	.78366 .00000	.80645 .00000	.83235 .00000	.86303 .00000	.90316 .00000	1.00000 .00000
.01	.69393 .01190	.70951 .01254	.72597 .01330	.74347 .01421	.76224 .01535	.78253 .01679	.80497 .01873	.83009 .02152	.85909 .02597	.89359 .03443	.93148 .05353
.02	.69280 .02371	.70819 .02497	.72440 .02645	.74157 .02822	.75966 .03039	.77952 .03312	.80081 .03668	.82407 .04157	.84954 .04865	.87678 .05946	.90308 .07568
.03	.69097 .03535	.70606 .03717	.72188 .03931	.73854 .04183	.75614 .04488	.77482 .04864	.79468 .05338	.81576 .05954	.83785 .06771	.86022 .07862	.88127 .09266
.04	.68848 .04675	.70319 .04909	.71853 .05178	.73456 .05494	.75135 .05868	.76893 .06313	.78730 .06870	.80634 .07551	.82574 .08400	.84489 .09446	.86287 .10696
.05	.68542 .05786	.69969 .06063	.71448 .06380	.72984 .06746	.74576 .07173	.76224 .07676	.77921 .08272	.79650 .08962	.81383 .09827	.83073 .10818	.84665 .11954
.06	.68186 .06865	.69566 .07173	.70988 .07534	.72453 .07939	.73961 .08403	.75505 .08934	.77077 .09559	.78660 .10277	.80231 .11103	.81755 .12043	.83198 .13091
.07	.67789 .07909	.69119 .08252	.70484 .08638	.71881 .09072	.73307 .09562	.74757 .10115	.76220 .10749	.77682 .11462	.79124 .12265	.80521 .13157	.81848 .14134
.08	.67357 .08917	.68636 .09285	.69946 .09693	.71278 .10148	.72630 .10656	.73993 .11222	.75364 .11855	.76724 .12558	.78061 .13335	.79356 .14186	.80592 .15105
.09	.66898 .09891	.68131 .10277	.69385 .10703	.70655 .11172	.71939 .11690	.73229 .12261	.74515 .12890	.75790 .13579	.77040 .14331	.78251 .15145	.79411 .16015
.10	.66416 .10830	.67603 .11231	.68806 .11669	.70020 .12147	.71241 .12679	.72463 .13241	.73679 .13863	.74880 .14538	.76057 .15266	.77196 .16046	.78294 .16874

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

K=5IN 35

B	A = .90	A = .91	A = .92	A = .93	A = .94	A = .95	A = .95	A = .97	A = .98	A = .99	A=1.00
0.00	.68683 .00000	.70272 .00000	.71955 .00000	.73750 .00000	.75631 .00000	.77784 .00000	.80116 .00000	.82767 .00000	.85919 .00000	.90036 .00000	1.00000 .00000
.01	.68644 .01315	.70226 .01388	.71900 .01473	.73682 .01577	.75596 .01704	.77673 .01864	.79962 .02087	.82534 .02400	.85507 .02901	.90049 .03851	.92943 .05995
.02	.68526 .02620	.70089 .02762	.71737 .02930	.73485 .03130	.75350 .03375	.77356 .03683	.79532 .04085	.81911 .04635	.84521 .05432	.87314 .06648	.90012 .08471
.03	.68335 .03905	.69867 .04112	.71475 .04354	.73170 .04639	.74964 .04983	.76863 .05407	.78897 .05943	.81051 .06637	.83312 .07558	.85603 .08786	.87759 .10366
.04	.68076 .05164	.69569 .05429	.71127 .05734	.72758 .06091	.74467 .06514	.76253 .07023	.78132 .07645	.80076 .08414	.82059 .09371	.84016 .10550	.85855 .11959
.05	.67758 .06390	.69204 .06704	.70706 .07063	.72266 .07477	.73886 .07960	.75564 .08528	.77292 .09201	.79056 .10004	.80824 .10957	.82549 .12077	.84174 .13358
.06	.67388 .07560	.68785 .07935	.70227 .08338	.71715 .08796	.73246 .09322	.74814 .09928	.76416 .10629	.78029 .11440	.79629 .12374	.81182 .13436	.82652 .14620
.07	.66974 .08730	.68320 .09120	.69703 .09556	.71119 .10048	.72567 .10603	.74033 .11233	.75526 .11946	.77013 .12754	.78479 .13661	.79900 .14671	.81250 .15776
.08	.66524 .09840	.67820 .10257	.69143 .10720	.70492 .11236	.71862 .11811	.73247 .12453	.74636 .13169	.76017 .13965	.77374 .14845	.78689 .15808	.79943 .16849
.09	.66045 .10911	.67291 .11349	.68558 .11832	.69844 .12364	.71142 .12951	.72443 .13599	.73752 .14312	.75044 .15093	.76311 .15946	.77539 .16867	.78714 .17854
.10	.65543 .11942	.66741 .12397	.67955 .12894	.69181 .13438	.70415 .14031	.71651 .14673	.72881 .15385	.74096 .16150	.75287 .16976	.76441 .17861	.77550 .18800

$$\frac{U/K+I/K'}{-1}$$

$$J+IV=SN \quad (A+18)$$

K=SIN 40

B	A= .90	A= .91	A= .92	A= .93	A= .94	A= .95	A= .96	A= .97	A= .98	A= .99	A=1.00
0.00	.67761 .00000	.69379 .00000	.71095 .00000	.72928 .00000	.74904 .00000	.77060 .00000	.79454 .00000	.82182 .00000	.85431 .00000	.89663 .00000	1.00000 .00000
.01	.67719 .01451	.69330 .01534	.71037 .01631	.72957 .01749	.74815 .01894	.76944 .02079	.79294 .02327	.81939 .02682	.85003 .03247	.88658 .04319	.92663 .06734
.02	.67596 .02891	.69106 .03053	.70866 .03243	.72650 .03471	.74558 .03749	.76612 .04098	.78845 .04554	.81220 .05176	.83976 .06077	.86854 .07451	.89637 .09508
.03	.67396 .04309	.68954 .04545	.70592 .04819	.72321 .05143	.74154 .05534	.76103 .06015	.78182 .06622	.80393 .07408	.82717 .08450	.85072 .09840	.87291 .11626
.04	.67124 .05697	.68641 .05998	.70227 .06345	.71839 .06751	.73634 .07232	.75465 .07810	.77382 .08515	.79374 .09387	.81408 .10471	.83417 .11807	.85305 .13403
.05	.66790 .07048	.68259 .07405	.69786 .07813	.71375 .08284	.73026 .08833	.74738 .09473	.76505 .10243	.78308 .11153	.80117 .12235	.81884 .13505	.83548 .14959
.06	.66402 .08357	.67819 .08761	.69284 .09219	.70797 .09741	.72356 .10339	.73956 .11028	.75587 .11825	.77233 .12746	.78867 .13507	.80454 .15014	.81955 .16359
.07	.65958 .09621	.67332 .10065	.68734 .10562	.70172 .11121	.71643 .11753	.73141 .12463	.74655 .13281	.76169 .14200	.77662 .15232	.79110 .16380	.80486 .17638
.08	.65495 .10840	.66806 .11315	.68147 .11842	.69514 .12429	.70904 .13084	.72303 .13815	.73720 .14631	.75124 .15538	.76503 .16539	.77840 .17636	.79114 .18822
.09	.64992 .12014	.66251 .12513	.67532 .13064	.68833 .13670	.70148 .14339	.71471 .15077	.72793 .15889	.74103 .16780	.75387 .17751	.76632 .18802	.77822 .19927
.10	.64464 .13143	.65673 .13662	.66898 .14228	.68137 .14848	.69394 .15524	.70634 .16263	.71878 .17068	.73107 .17941	.74310 .18883	.75478 .19893	.76598 .20966

$$U/K+IV/K' \\ -1 \\ J+IV=SN \quad (A+IB)$$

K=SIN 45

B	A= .90	A= .91	A= .92	A= .93	A= .94	A= .95	A= .96	A= .97	A= .98	A= .99	A=1.00
0.00	.66670 .00000	.68281 .00000	.70035 .00000	.71912 .00000	.73941 .00000	.76160 .00000	.78630 .00000	.81450 .00000	.84819 .00000	.89240 .00000	1.00000 .00000
.01	.66586 .01602	.68229 .01697	.69974 .01808	.71838 .01943	.73848 .02108	.76030 .02320	.78460 .02602	.81195 .03007	.84369 .03651	.88166 .04868	.92354 .07608
.02	.66456 .03191	.68077 .03377	.69793 .03594	.71520 .03854	.73576 .04172	.75689 .04572	.77987 .05092	.80512 .05802	.83290 .06829	.86273 .08392	.89161 .10737
.03	.66244 .04755	.67832 .05025	.69504 .05339	.71272 .05710	.73150 .06157	.75151 .06707	.77289 .07401	.79568 .08298	.81966 .09488	.84400 .11072	.86694 .13108
.04	.65957 .06285	.67501 .06629	.69118 .07027	.70815 .07491	.72600 .08042	.74477 .08703	.76445 .09510	.78493 .10507	.80587 .11746	.82657 .13272	.84602 .15094
.05	.65604 .07771	.67097 .08181	.68552 .08640	.70071 .09188	.71556 .09817	.73099 .10555	.75180 .11431	.77368 .12473	.79225 .13711	.81039 .15164	.82748 .16828
.06	.65193 .09210	.66632 .09874	.68121 .10199	.69660 .10797	.71249 .11482	.72882 .12272	.74549 .13185	.76232 .14241	.77903 .15456	.79527 .16839	.81063 .18381
.07	.64734 .10598	.66116 .11107	.67538 .11677	.68999 .12318	.70495 .13043	.72020 .13864	.73562 .14795	.75105 .15849	.76628 .17033	.78104 .18351	.79506 .19795
.08	.64234 .11934	.65560 .12479	.66917 .13084	.68302 .13757	.69712 .14508	.71139 .15347	.72572 .16283	.73998 .17324	.75400 .18475	.76757 .19735	.78050 .21098
.09	.63701 .13210	.64972 .13791	.66255 .14422	.67581 .15118	.68912 .15895	.70251 .16737	.71589 .17665	.72916 .18669	.74216 .19806	.75475 .21014	.76678 .22309
.10	.63143 .14450	.64360 .15045	.65595 .15696	.66844 .16406	.68102 .17183	.69363 .18032	.70618 .18956	.71859 .19960	.73073 .21044	.74249 .22206	.75375 .23443

$$\frac{U/K+IV/K'}{-1}$$

$$J+IV=SN \quad (A+IB)$$

$$K=\sin 50$$

B	A = .90	A = .91	A = .92	A = .93	A = .94	A = .95	A = .96	A = .97	A = .98	A = .99	A = 1.00
0.00	.65247 .00006	.66933 .00000	.68723 .00300	.70657 .00000	.72746 .00000	.75039 .00000	.77598 .00000	.80531 .00000	.84046 .00000	.88677 .00000	1.00000 .00000
.01	.65200 .01770	.66873 .01879	.68664 .02008	.70578 .02154	.72647 .02355	.74908 .02600	.77418 .02926	.80259 .03392	.83569 .04133	.87541 .05531	.91932 .08672
.02	.65061 .03525	.66716 .03740	.68471 .03991	.70345 .04292	.72357 .04650	.74535 .05121	.76914 .05722	.79533 .06541	.82423 .07724	.85533 .09523	.88548 .12214
.03	.64035 .05251	.66453 .05563	.68162 .05926	.69974 .06356	.71902 .06873	.73963 .07503	.76169 .08310	.78527 .09346	.81014 .10719	.83542 .12547	.85925 .14895
.04	.64529 .06937	.66101 .07336	.67751 .07795	.69486 .08333	.71315 .08959	.73241 .09734	.75269 .10660	.77381 .11820	.79544 .13252	.81684 .15017	.83693 .17124
.05	.64152 .08574	.65670 .09047	.67253 .09580	.68905 .10212	.70629 .10939	.72423 .11794	.74279 .12680	.76179 .14014	.78089 .15447	.79955 .17130	.81711 .19059
.06	.63714 .10155	.65173 .10691	.66686 .11238	.68252 .11990	.69872 .12783	.71539 .13697	.73243 .14755	.74964 .15979	.76675 .17388	.78337 .18991	.79905 .20762
.07	.63224 .11677	.64623 .12265	.66064 .12924	.67546 .13666	.69066 .14505	.70617 .15456	.72187 .16535	.73758 .17757	.75309 .19131	.76811 .20662	.78234 .22341
.08	.62691 .13139	.64029 .13763	.65400 .14467	.66902 .15246	.68429 .16126	.69974 .17088	.71527 .18173	.73073 .19360	.74692 .20717	.75366 .22181	.76670 .23768
.09	.62124 .14532	.63402 .15201	.64706 .15930	.66031 .16735	.67373 .17624	.68724 .18600	.70075 .19687	.71412 .20875	.72722 .22172	.73988 .23578	.75195 .25086
.10	.61528 .15879	.62749 .16566	.63989 .17318	.65243 .18140	.66507 .19039	.67774 .20022	.69035 .21095	.70279 .22260	.71495 .23519	.72671 .24871	.73793 .26311

$$\frac{U/K + IV/K}{-1}$$

$$U + IV = SN \quad (A + IB)$$

$$K = \sin 55$$

B	A = .90	A = .91	A = .92	A = .93	A = .94	A = .95	A = .96	A = .97	A = .98	A = .99	A = 1.00
0.00	.63550 .00000	.65272 .00000	.67113 .00000	.69097 .00000	.71254 .00000	.73630 .00000	.76295 .00000	.79363 .00000	.83059 .00000	.87953 .00000	1.00000 .00000
.01	.63500 .01958	.65213 .02086	.67043 .02237	.69011 .02419	.71146 .02643	.73490 .02923	.76101 .03312	.79070 .03858	.82545 .04723	.86734 .06354	.91382 .10009
.02	.63350 .03899	.65039 .04150	.66836 .04444	.68759 .04796	.70833 .05226	.73085 .05767	.75557 .06472	.78287 .07432	.81311 .08816	.84575 .10919	.87745 .14065
.03	.63107 .05806	.64756 .06170	.66502 .06594	.68359 .07097	.70342 .07703	.72461 .08448	.74752 .09388	.77200 .10603	.79789 .12213	.82426 .14356	.84913 .17111
.04	.62778 .07865	.64376 .08150	.66058 .08667	.67833 .09296	.69708 .10042	.71690 .10932	.73779 .12034	.75961 .13387	.78199 .15069	.80415 .17142	.82495 .19622
.05	.62373 .09866	.63912 .10014	.65522 .10650	.67206 .11381	.68967 .12232	.70803 .13235	.72707 .14424	.74659 .15841	.76623 .17526	.78540 .19507	.80342 .21781
.06	.61902 .11802	.63378 .11827	.64911 .12536	.66501 .13344	.68149 .14273	.69847 .15345	.71585 .16587	.73343 .18025	.75089 .19683	.76783 .21572	.78377 .23686
.07	.61376 .12868	.62786 .13592	.64241 .14322	.65740 .15169	.67279 .16171	.68859 .1728	.70442 .18532	.72036 .19988	.73607 .21605	.75125 .23409	.76557 .25392
.08	.60804 .14881	.62149 .15194	.63527 .16010	.64938 .16919	.66375 .17937	.67832 .19075	.69296 .20348	.70751 .21766	.72177 .23338	.73552 .25064	.74853 .26936
.09	.60196 .15983	.61475 .16754	.62780 .17603	.64108 .18542	.65453 .19581	.66805 .20725	.68158 .21997	.69494 .23391	.70799 .24916	.72056 .26571	.73246 .28350
.10	.59559 .17435	.60775 .18233	.62011 .19108	.63261 .20065	.64520 .21115	.65781 .2226	.67034 .23519	.68268 .24884	.69470 .26363	.70626 .27953	.71721 .29649

$$\frac{U/K+IV/K'}{-1}$$

$$J+IV=SN \quad (A+18)$$

$$K=\sin 60$$

B	A = .90	A = .91	A = .92	A = .93	A = .94	A = .95	A = .96	A = .97	A = .98	A = .99	A = 1.00
0.00	.61458 .00000	.63213 .00000	.65099 .00000	.67139 .00000	.69359 .00000	.71840 .00000	.74626 .00000	.77855 .00000	.81772 .00000	.87001 .00000	1.00000 .00000
.01	.61403 .02169	.63149 .02320	.65022 .02498	.67045 .02714	.69251 .02981	.71695 .03323	.74413 .03779	.77534 .04431	.81209 .05465	.85670 .07407	.90644 .11752
.02	.61241 .04316	.62960 .04612	.64796 .04961	.66774 .05379	.68909 .05891	.71243 .06536	.73815 .07377	.76673 .08524	.79855 .10179	.83305 .12693	.86660 .16453
.03	.60978 .06423	.62652 .06852	.64433 .07355	.66334 .07951	.68371 .08672	.70565 .09560	.72932 .10602	.75479 .12136	.78182 .14063	.80941 .16631	.83540 .19938
.04	.60622 .08472	.62240 .09021	.63950 .09656	.65759 .10402	.67678 .11268	.69713 .12357	.71863 .13664	.74117 .15202	.76431 .17297	.78723 .19785	.80867 .22768
.05	.60184 .10452	.61737 .11102	.63367 .11849	.65076 .12713	.66868 .13725	.68742 .14918	.70688 .16336	.72685 .18030	.74694 .20049	.76653 .22427	.78482 .25165
.06	.59675 .12353	.61159 .13083	.62703 .13924	.64309 .14880	.65976 .15931	.67696 .17255	.69458 .18733	.71239 .20451	.73005 .22435	.74711 .24701	.76305 .27244
.07	.59103 .14170	.60519 .14974	.61977 .15879	.63482 .16903	.65028 .18055	.66608 .19387	.68207 .20892	.69805 .22602	.71375 .24534	.72883 .26694	.74292 .29076
.08	.58493 .15901	.59831 .16759	.61205 .17717	.62612 .18788	.64056 .19988	.65498 .21335	.66955 .22844	.68398 .24530	.69806 .26403	.71153 .28464	.72412 .30707
.09	.57840 .17546	.59106 .18446	.60400 .19441	.61715 .20544	.63046 .21766	.64383 .23121	.65715 .24619	.67027 .26271	.68299 .28062	.69512 .30051	.70646 .32172
.10	.57157 .19106	.58355 .20037	.59572 .21058	.60801 .22180	.62038 .23411	.63273 .24762	.64496 .26240	.65693 .27852	.66850 .29600	.67951 .31484	.68979 .33497

$$\frac{U/K+IV/K}{-1}$$

$$U+IV=SN \quad (A+IB)$$

K=SIN 65

B	A = .90	A = .91	A = .92	A = .93	A = .94	A = .95	A = .95	A = .96	A = .97	A = .98	A = .99	A = 1.00
0.00	.58856 .00000	.63636 .00000	.62551 .00000	.64651 .00000	.66954 .00000	.69522 .00000	.72444 .00000	.75860 .00000	.79417 .06422	.80048 .00000	.85707 .00000	1.00000 .00000
.01	.58796 .02400	.60566 .02581	.62474 .02795	.64547 .03055	.66823 .03379	.69350 .03794	.72205 .04352	.75500 .05152	.784218 .08806	.79417 .06422	.84218 .08806	.89610 .14132
.02	.58620 .04775	.60359 .05128	.62226 .05546	.64244 .06049	.66443 .06669	.68658 .07453	.71537 .08480	.74535 .09887	.77895 .11921	.77895 .11921	.81560 .15017	.85128 .19558
.03	.58334 .07099	.60024 .07611	.61828 .08212	.63763 .08929	.65848 .09800	.68104 .10978	.70550 .12246	.73196 .14026	.76014 .16394	.76014 .16394	.78894 .19560	.81596 .23655
.04	.57948 .09354	.59575 .10005	.61299 .10764	.63131 .11659	.65082 .12727	.67157 .14021	.69359 .15610	.71671 .17587	.74046 .20059	.74046 .20059	.76392 .23123	.78565 .26814
.05	.57474 .11522	.59028 .12293	.60662 .13182	.62382 .14216	.64189 .15431	.66082 .16871	.68052 .18590	.70073 .20652	.72099 .23119	.72099 .23119	.74061 .26038	.75866 .29413
.06	.56925 .13595	.58401 .14464	.59940 .15456	.61543 .16596	.63209 .17913	.64930 .19411	.66690 .21228	.68465 .23308	.70214 .25721	.70214 .25721	.71885 .28487	.73417 .31602
.07	.56315 .15565	.57709 .16512	.59153 .17583	.60642 .18798	.62173 .20182	.63735 .21763	.65312 .23570	.66879 .25630	.68405 .27964	.68405 .27964	.69850 .30582	.71169 .33475
.08	.55655 .17431	.56969 .18438	.58318 .19566	.59700 .20731	.61105 .22255	.62524 .23856	.63941 .25657	.65334 .27674	.66778 .29920	.66778 .29920	.67940 .32398	.69089 .35098
.09	.54957 .19192	.56193 .20244	.57452 .21411	.58732 .22707	.60023 .24149	.61314 .25750	.62592 .27527	.63838 .29489	.65030 .31643	.65030 .31643	.66144 .33990	.67155 .36518
.10	.54231 .20853	.55391 .21935	.56566 .23127	.57752 .24438	.58939 .25882	.60118 .27469	.61275 .29209	.62395 .31110	.63461 .33173	.63461 .33173	.64452 .35397	.65349 .37773

$$\frac{U/K+IV/K'}{-1}$$

$$J+IV=SN \quad (A+B)$$

$$K=\sin 70$$

B	A = .90	A = .91	A = .92	A = .93	A = .94	A = .95	A = .95	A = .96	A = .97	A = .98	A = .99	A = 1.00
0.00	.55585 .00000	.57370 .00000	.59309 .00000	.61437 .00000	.63797 .00000	.66456 .00000	.69513 .00000	.73137 .00000	.77650 .00000	.83866 .00000	.91000 .00000	1.00000 .00000
.01	.55521 .02640	.57293 .02865	.59217 .03124	.61322 .03441	.63650 .03840	.66261 .04356	.69241 .05056	.72722 .06068	.76919 .07687	.82139 .10743	.88064 .17580	.94864 .28119
.02	.55330 .05264	.57067 .05687	.58944 .06191	.60986 .06804	.63225 .07565	.65706 .08537	.68480 .09821	.71614 .11596	.75157 .14184	.79046 .18151	.83219 .24141	.87678 .32649
.03	.55021 .07817	.56703 .08428	.58507 .09152	.60453 .10022	.62562 .11097	.64857 .12414	.67361 .14120	.70081 .16353	.72987 .19348	.75948 .23386	.78678 .28649	.81553 .35021
.04	.54605 .10283	.56216 .11052	.57930 .11969	.59759 .13049	.61713 .14349	.63799 .15935	.66018 .17899	.68348 .20360	.70734 .23460	.73060 .27330	.75153 .32021	.76963 .38648
.05	.54097 .12643	.55626 .13557	.57238 .14618	.58938 .15860	.60729 .17320	.62605 .19080	.64557 .21186	.66549 .23727	.68528 .26787	.70404 .30425	.72063 .34648	.73468 .42162
.06	.53511 .14884	.54952 .15909	.56457 .17086	.58027 .18446	.59657 .20027	.61337 .21874	.63049 .24038	.64759 .26574	.66420 .29526	.67963 .32922	.69311 .36750	.70404 .44834
.07	.52862 .17000	.54213 .18111	.55612 .19373	.57054 .20812	.58533 .22460	.60035 .24350	.61539 .26518	.63017 .28999	.64426 .31816	.65717 .34979	.66834 .38470	.67687 .46587
.08	.52165 .18988	.53427 .20163	.54722 .21483	.56045 .22971	.57384 .24651	.58728 .26547	.60055 .28685	.61340 .31084	.62550 .33757	.63646 .36703	.64587 .39903	.65287 .48117
.09	.51431 .20851	.52608 .22070	.53805 .23427	.55016 .24939	.56231 .26625	.57435 .28503	.58612 .30548	.59738 .32893	.60788 .35423	.61730 .38170	.62534 .41117	.63162 .49649
.10	.50673 .22592	.51768 .23839	.52874 .25215	.53984 .26733	.55087 .28407	.56170 .30241	.57219 .32271	.58213 .34477	.59132 .36868	.59951 .39435	.60649 .42162	.61162 .50649

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+18)$$

$$X=\sin 75$$

B	A = .90	A = .91	A = .92	A = .93	A = .94	A = .95	A = .96	A = .97	A = .98	A = .99	A = 1.00
0.00	.51411 .00000	.53161 .00000	.55077 .00000	.57196 .00000	.59572 .00000	.62281 .00000	.65444 .00000	.69263 .00000	.74133 .00000	.81060 .00000	1.00000 .00000
.01	.51343 .02898	.53079 .03156	.54976 .03469	.57070 .03857	.59408 .04351	.62061 .05001	.65129 .05867	.68777 .07220	.73253 .09379	.78951 .13531	.85498 .22959
.02	.51141 .05754	.52837 .06258	.54681 .06865	.56702 .07611	.58936 .08551	.61431 .09767	.64255 .11400	.67475 .13697	.71151 .17107	.75192 .22427	.79010 .30592
.03	.50815 .08533	.52449 .09258	.54211 .10125	.56121 .11178	.58204 .12482	.60483 .14132	.62982 .16272	.65704 .19120	.68603 .22993	.71500 .28281	.74014 .35236
.04	.50378 .11202	.51932 .12118	.53593 .13201	.55370 .14499	.57274 .16076	.59312 .18071	.61476 .20454	.63738 .23535	.66018 .27452	.68161 .32374	.69931 .38344
.05	.49846 .13740	.51310 .14812	.52857 .16065	.54490 .17544	.56210 .19307	.58003 .21427	.59867 .23994	.61740 .27113	.63554 .30845	.65190 .35375	.66498 .40555
.06	.49237 .16133	.50605 .17327	.52035 .18706	.53523 .20309	.55054 .22184	.56644 .24383	.58235 .26983	.59796 .30032	.61261 .33587	.62546 .37661	.63552 .42208
.07	.48567 .18373	.49838 .19658	.51152 .21124	.52502 .22803	.53879 .24734	.55264 .26957	.56631 .29514	.57942 .32441	.59146 .35759	.60181 .39459	.60981 .43496
.08	.47852 .20461	.49029 .21809	.50232 .23328	.51454 .25047	.52682 .26932	.53909 .29192	.55041 .31674	.56194 .34455	.57199 .37541	.58052 .40915	.58707 .44533
.09	.47106 .22400	.48192 .23787	.49293 .25335	.50398 .27064	.51496 .28934	.52570 .31145	.53598 .33531	.54553 .36160	.55406 .39030	.56122 .42120	.56670 .45393
.10	.46339 .24197	.47342 .25605	.48348 .27161	.49349 .28879	.50333 .30775	.51285 .32860	.52196 .35142	.53015 .37624	.53748 .40296	.54360 .43140	.54829 .46123

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+18)$$

$$K=\sin 30$$

B	A = .90	A = .91	A = .92	A = .93	A = .94	A = .95	A = .96	A = .97	A = .98	A = .99	A = 1.00
0.00	.45945 .00000	.47590 .00000	.49404 .00000	.51430 .00000	.53726 .00000	.56381 .00000	.59537 .00000	.63442 .00000	.68597 .00000	.76333 .00000	1.00000 .00000
.01	.45876 .03121	.47506 .03423	.49300 .03793	.51297 .04258	.53551 .04861	.56133 .05672	.59181 .06821	.62866 .08573	.67511 .11551	.73581 .17565	.80469 .31899
.02	.45673 .06192	.47260 .06778	.48996 .07493	.50911 .08384	.53047 .09523	.55454 .11025	.58201 .13089	.61364 .16066	.64987 .20616	.68891 .27912	.72158 .39265
.03	.45346 .09168	.46866 .10007	.48513 .11021	.50308 .12268	.52273 .13832	.54432 .15842	.56803 .18491	.59377 .22078	.62066 .27032	.64602 .33848	.66441 .42708
.04	.44909 .12010	.46346 .13063	.47884 .14320	.49534 .15841	.51304 .17708	.53194 .20036	.55191 .22980	.57245 .26743	.59244 .31548	.60977 .37558	.62147 .44685
.05	.44382 .14695	.45724 .15919	.47142 .17359	.48639 .19073	.50211 .21130	.51845 .23622	.53512 .26657	.55153 .30356	.56669 .34820	.57917 .40072	.58731 .45984
.06	.43781 .17207	.45024 .18559	.46321 .20129	.47668 .21964	.49054 .24121	.50460 .26666	.51851 .29669	.53176 .33194	.54356 .37276	.55298 .41890	.55902 .46921
.07	.43126 .19539	.44271 .20982	.45450 .22635	.46656 .24535	.47875 .26725	.49085 .29251	.50254 .32154	.51339 .35464	.52282 .39184	.53020 .43275	.53492 .47643
.08	.42432 .21696	.43483 .23196	.44552 .24893	.45630 .26816	.46702 .28994	.47743 .31457	.48740 .34228	.49642 .37316	.50414 .40711	.51010 .44373	.51354 .48228
.09	.41713 .23682	.42575 .25215	.43643 .26927	.44608 .28841	.45554 .30977	.46464 .33353	.47314 .35980	.48076 .38757	.48721 .41967	.49216 .45274	.49538 .48720
.10	.40980 .25510	.41861 .27053	.42738 .28759	.43603 .30644	.44442 .32720	.45239 .34997	.45975 .37479		.47177 .43022	.47598 .46032	.47875 .49146

$$U/X + IV/K' - 1$$

$$U + IV = SN (A + IB)$$

K = SIN 85

B	A = .90	A = .91	A = .92	A = .93	A = .94	A = .95	A = .96	A = .97	A = .98	A = .99	A = 1.00
0.00	.38262 .00000	.39681 .00000	.41256 .00000	.43026 .00000	.45052 .00000	.47424 .00000	.50291 .00000	.53926 .00000	.58921 .00000	.67017 .00000	1.00000 .00000
.01	.38200 .03281	.39604 .03617	.41159 .04034	.42801 .04565	.44884 .05264	.47185 .06225	.49928 .07625	.53311 .09843	.57673 .13828	.63452 .22512	.68942 .44255
.02	.38016 .06504	.39379 .07155	.40878 .07956	.42539 .08967	.44403 .10278	.46519 .12039	.48947 .14508	.51753 .18163	.54936 .23905	.58160 .33271	.60132 .47302
.03	.37720 .09616	.39021 .10544	.40434 .11675	.41978 .13079	.43673 .14860	.45539 .17177	.47583 .20273	.49776 .24518	.51992 .30424	.53890 .38470	.54880 .48458
.04	.37328 .12577	.38549 .13734	.39859 .15125	.41265 .16821	.42772 .18920	.44370 .21557	.46054 .24916	.47742 .29223	.49311 .34704	.50534 .41437	.51138 .49120
.05	.36856 .15357	.37990 .16694	.39168 .18276	.40451 .20157	.41771 .22449	.43133 .25225	.44502 .28613	.45812 .32734	.46982 .37664	.47814 .43361	.48230 .49581
.06	.36322 .17943	.37366 .19410	.38453 .21120	.39577 .23126	.40726 .25489	.41879 .28280	.43000 .31571	.44036 .35415	.44911 .39824	.45541 .44725	.45852 .49942
.07	.35744 .20331	.36698 .21885	.37678 .23671	.38675 .25728	.39674 .28100	.40654 .30834	.41582 .33967	.42416 .37519	.43105 .41472	.43595 .45756	.43842 .50245
.08	.35134 .22524	.36005 .24131	.36887 .25951	.37711 .28014	.38641 .30349	.39478 .32986	.40256 .35940	.40911 .39400	.41500 .42778	.41895 .46575	.42100 .50512
.09	.34507 .24534	.35259 .26165	.36092 .27988	.36877 .30026	.37639 .32297	.38361 .34815	.39022 .37590	.39622 .40500	.40060 .43845	.40388 .47251	.40564 .50755
.10	.33870 .26373	.34592 .28006	.35307 .29812	.36005 .31804	.36676 .33994	.37304 .36390	.37873 .38991	.38363 .41782	.38756 .44740	.39036 .47824	.39191 .50981

$$\frac{U/K+IV/K'}{-1}$$

$$J+IV=SN \quad (A+IR)$$

K=SN 86

B	A = .90	A = .91	A = .92	A = .93	A = .94	A = .95	A = .96	A = .97	A = .98	A = .99	A = 1.00
0.00	.36229 .00000	.37579 .00000	.39078 .00000	.40765 .00000	.42638 .00000	.44967 .00000	.47712 .00000	.51209 .00000	.56047 .00000	.64006 .00000	1.00000 .00000
.01	.36169 .03302	.37505 .03642	.38985 .04066	.40645 .04606	.42536 .05319	.44734 .06302	.47359 .07741	.51605 .09035	.54803 .11195	.60362 .23383	.65319 .46321
.02	.35993 .06545	.37290 .07204	.38715 .08217	.40297 .09045	.42072 .10380	.44089 .12179	.46406 .14708	.49087 .18466	.52111 .24393	.55136 .34065	.56858 .43381
.03	.35711 .09674	.36946 .10814	.38289 .11760	.39757 .13186	.41370 .14997	.43144 .17354	.45086 .20517	.47166 .24896	.49254 .30894	.51011 .39094	.51870 .49184
.04	.35336 .12650	.36495 .13821	.37739 .15230	.39074 .16350	.40504 .19030	.42025 .21759	.43614 .25174	.45207 .29594	.46676 .35121	.47801 .41938	.48324 .49666
.05	.34805 .15442	.35960 .16794	.37097 .18394	.38294 .20309	.39545 .22621	.40834 .25434	.42125 .28868	.43357 .33043	.44430 .38030	.45211 .43774	.45572 .50018
.06	.34375 .18037	.35364 .19219	.36394 .21247	.37458 .23275	.38545 .25665	.39634 .28489	.40690 .31815	.41560 .35699	.42474 .40145	.43052 .45075	.43323 .50307
.07	.33823 .20431	.34727 .22000	.35655 .23803	.36597 .25879	.37541 .28275	.38464 .31035	.39337 .34197	.40118 .37777	.40757 .41756	.41206 .46060	.41422 .50558
.08	.33242 .22629	.34066 .24249	.34900 .25085	.35734 .28165	.36555 .30520	.37347 .33179	.38074 .36154	.38716 .39449	.39234 .43032	.39595 .46843	.39776 .50786
.09	.32645 .24641	.33394 .25284	.34143 .28122	.34884 .30174	.35602 .32462	.36281 .34993	.36900 .37789	.37437 .40825	.37867 .44075	.38166 .47490	.38324 .50999
.10	.32039 .26480	.32721 .28125	.33396 .29943	.34054 .31948	.34686 .34153	.35276 .36563	.35809 .39177	.36266 .41981	.36631 .44950	.36886 .48041	.37026 .51211

$$\frac{U/K+IV/K}{-1}$$

$$J+IV=SN \quad (A+IB)$$

K=SIN 87

B	A = .90	A = .91	A = .92	A = .93	A = .94	A = .95	A = .95	A = .95	A = .97	A = .98	A = .99	A = 1.00
0.90	.33881 .00000	.35148 .00000	.36556 .00000	.38142 .00000	.39960 .00000	.42096 .00000	.44690 .00000	.48002 .00000	.52610 .00000	.60294 .00000	1.00000 .00000	
.01	.33825 .03319	.35079 .03663	.36468 .04091	.38028 .04639	.39806 .05363	.41875 .06364	.44352 .07835	.47420 .10151	.51398 .14500	.56656 .24122	.61065 .47984	
.02	.33659 .06577	.34875 .07243	.36213 .08066	.37598 .09107	.39366 .10462	.41262 .12290	.43442 .14869	.45961 .18712	.48802 .24789	.51605 .34706	.53102 .49227	
.03	.33392 .09720	.34551 .10669	.35811 .11828	.37188 .13271	.38701 .15107	.40365 .17502	.42187 .20712	.44134 .25127	.46078 .31269	.47690 .39590	.48433 .49750	
.04	.33039 .12707	.34126 .13890	.35291 .15313	.36542 .17051	.37882 .19207	.39307 .21920	.40792 .25380	.42278 .29218	.43638 .35452	.44665 .42331	.45118 .50091	
.05	.32614 .15509	.33322 .16872	.34686 .18489	.35806 .20421	.36977 .22757	.38181 .25600	.39386 .29070	.40531 .33287	.41521 .38318	.42233 .44098	.42547 .50359	
.06	.32135 .18111	.33060 .19605	.34023 .21347	.35018 .23392	.36034 .25803	.37050 .28652	.38033 .32007	.38933 .35921	.39684 .40396	.40209 .45349	.40446 .50590	
.07	.31615 .20510	.32461 .22091	.33328 .23906	.34208 .25999	.35049 .28413	.35950 .31193	.36761 .34377	.37494 .37980	.38073 .41919	.38481 .46297	.38671 .50801	
.08	.31070 .22711	.31839 .24342	.32618 .26189	.33397 .28284	.34182 .30655	.34897 .33329	.35577 .36312	.36168 .39633	.36645 .43231	.36974 .47052	.37133 .50999	
.09	.30508 .24724	.31208 .26378	.31907 .28226	.32598 .30291	.33287 .32591	.33898 .35142	.34473 .37946	.34970 .40993	.35365 .44254	.35640 .47676	.35778 .51188	
.10	.29940 .26565	.30576 .28218	.31205 .30046	.31819 .32061	.32408 .34277	.32956 .36593	.33450 .39323	.33873 .42137	.34208 .45113	.34443 .48209	.34565 .51371	

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin \theta$$

B	A = .90	A = .91	A = .92	A = .93	A = .94	A = .95	A = .96	A = .97	A = .98	A = .99	A = 1.00
0.30	.31021 .00000	.32184 .00000	.33476 .00000	.34934 .00000	.36606 .00000	.38572 .00000	.40964 .00000	.44025 .00000	.48301 .00000	.55509 .00000	1.00000 .00000
.01	.30069 .03330	.32120 .03677	.33395 .04109	.34828 .04652	.36463 .05395	.38369 .06410	.40649 .07904	.43480 .10307	.47156 .14729	.52008 .24686	.55869 .47790
.02	.30316 .06600	.31932 .07271	.33160 .08101	.34524 .09152	.36056 .10522	.37799 .12372	.39803 .14987	.42119 .18692	.44726 .25082	.47272 .35177	.48565 .49833
.03	.30570 .09753	.31633 .10709	.32789 .11878	.34053 .13333	.35441 .15186	.36969 .17607	.38640 .20855	.40424 .25324	.42197 .31543	.43650 .39948	.44291 .50154
.04	.30245 .12748	.31241 .13939	.32310 .15373	.33457 .17125	.34686 .19299	.35991 .22036	.37351 .25529	.38708 .30008	.39944 .35691	.40867 .42614	.41258 .50394
.05	.29854 .15557	.30777 .16929	.31752 .18555	.32779 .20502	.33851 .22855	.34953 .25719	.36054 .29216	.37098 .33453	.37996 .38525	.38634 .44330	.38906 .50601
.06	.29413 .18154	.30261 .19687	.31143 .21420	.32054 .23477	.32983 .25903	.33912 .28770	.34809 .32146	.35628 .36082	.36303 .40577	.36779 .45545	.36985 .50733
.07	.26936 .20567	.29710 .22155	.30503 .23981	.31309 .26085	.32114 .28512	.32899 .31307	.33639 .34507	.34297 .38125	.34831 .42138	.35196 .46467	.35361 .50975
.08	.28434 .22770	.29138 .24409	.29844 .26265	.30563 .28369	.31262 .30751	.31932 .33437	.32550 .36443	.33089 .39766	.33520 .43372	.33816 .47201	.33955 .51151
.09	.27918 .24785	.28559 .26445	.29199 .28301	.29829 .30374	.30439 .32684	.31016 .35244	.31539 .38058	.31990 .41114	.32348 .44383	.32594 .47810	.32715 .51323
.10	.27396 .26625	.27978 .28285	.28553 .30119	.29114 .32143	.29651 .34366	.30151 .36795	.30601 .39427	.30985 .42248	.31288 .45230	.31498 .48329	.31607 .51493

$$\frac{U/K+IV/K}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 89$$

B	A = .90	A = .91	A = .92	A = .93	A = .94	A = .95	A = .96	A = .97	A = .98	A = .99	A = 1.00
0.00	.27084 .00000	.28101 .00000	.29231 .00000	.30506 .00000	.31970 .00000	.33693 .00000	.35789 .00000	.38477 .00000	.42243 .00000	.46632 .00000	1.00000 .00000
.01	.27038 .03338	.28044 .03686	.29160 .04120	.30414 .04677	.31845 .05414	.33513 .06437	.35512 .07946	.37995 .10379	.41223 .14871	.45478 .25039	.48747 .49917
.02	.26904 .06614	.27880 .07288	.28953 .08122	.30147 .09179	.31487 .10558	.33013 .12422	.34767 .15059	.36793 .19003	.39072 .25261	.42371 .35465	.45197 .50197
.03	.26689 .09773	.27618 .10733	.28628 .11907	.29733 .13370	.30947 .15234	.32283 .17675	.33744 .20941	.35301 .25444	.36846 .31710	.38103 .40166	.39641 .50397
.04	.26404 .12774	.27275 .13959	.28200 .15409	.29211 .17170	.30284 .19354	.31425 .22107	.32612 .25619	.33794 .30124	.34869 .35836	.35666 .42785	.35995 .50576
.05	.26062 .15586	.26868 .16963	.27720 .18596	.28616 .20551	.29552 .22915	.30514 .25792	.31474 .29305	.32383 .33570	.33163 .38650	.33713 .44470	.33943 .50747
.06	.25676 .18196	.26416 .19704	.27186 .21463	.27981 .23528	.28792 .25964	.29607 .28441	.30384 .32229	.31056 .36178	.31686 .40686	.32093 .45663	.32267 .50914
.07	.25258 .20601	.25933 .22195	.26626 .24026	.27329 .26137	.28031 .28572	.28716 .31376	.29350 .34585	.29932 .38213	.30394 .42234	.30709 .46569	.30850 .51079
.08	.24819 .22805	.25433 .24449	.26055 .26310	.26676 .28420	.27286 .30009	.27869 .33503	.28407 .36516	.28876 .39845	.29250 .43459	.29504 .47291	.29623 .51242
.09	.24368 .24021	.24926 .26485	.25484 .28346	.26034 .30425	.26566 .32740	.27068 .35306	.27524 .38126	.27915 .41187	.28226 .44460	.28438 .47890	.28541 .51404
.10	.23911 .26662	.24419 .28325	.24920 .30164	.25409 .32191	.25877 .34419	.26312 .36853	.26703 .39490	.27037 .42315	.27300 .45300	.27482 .48402	.27574 .51566

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A>18)$$

K=SIN 5

	A=9.00	A= .10	A= .20	A= .30	A= .40	A= .50	A= .60	A= .7:	A= .80	A= .90	A=1.00
1/8											
.01	.00000 .97012	.00007 .97012	.00014 .97012	.00022 .97012	.00029 .97012	.00036 .97012	.00043 .97012	.00051 .97012	.00058 .97012	.00065 .97012	.00072 .97012
.02	.00000 .94063	.00028 .94063	.00057 .94063	.00085 .94063	.00114 .94063	.00142 .94064	.00170 .94064	.00199 .94064	.00227 .94064	.00256 .94065	.00284 .94065
.03	.00000 .91187	.00062 .91187	.00124 .91187	.00186 .91187	.00248 .91188	.00310 .91189	.00372 .91189	.00434 .91190	.00496 .91191	.00558 .91193	.00620 .91194
.04	.00000 .88410	.00106 .88411	.00212 .88411	.00318 .88412	.00424 .88413	.00529 .88414	.00635 .88416	.00741 .88418	.00847 .88421	.00952 .88423	.01058 .88426
.05	.00000 .85753	.00158 .85753	.00316 .85754	.00474 .85755	.00631 .85757	.00789 .85760	.00947 .85763	.01104 .85767	.01262 .85771	.01419 .85776	.01576 .85781
.06	.00000 .83225	.00216 .83225	.00432 .83226	.00647 .83229	.00863 .83232	.01078 .83235	.01294 .83241	.01509 .83246	.01724 .83253	.01938 .83261	.02153 .83269
.07	.00000 .80829	.00278 .80830	.00556 .80832	.00833 .80835	.01111 .80839	.01388 .80845	.01665 .80852	.01942 .80861	.02218 .80870	.02495 .80881	.02770 .80893
.08	.00000 .78566	.00343 .78567	.00685 .78569	.01028 .78573	.01370 .78580	.01712 .78587	.02053 .78597	.02394 .78608	.02735 .78621	.03075 .78636	.03414 .78652
.09	.00000 .76429	.00409 .76431	.00818 .76434	.01227 .76439	.01636 .76447	.02044 .76457	.02451 .76470	.02858 .76484	.03264 .76501	.03670 .76520	.04074 .76541
.10	.00000 .74414	.00477 .74415	.00953 .74419	.01429 .74426	.01905 .74436	.02380 .74449	.02855 .74464	.03328 .74482	.03801 .74503	.04273 .74526	.04743 .74552

$$\frac{U/K + IV/K'}{U + IV = SN} \quad (A + iB)$$

$$K = \sin 10$$

1/B	A = 0.00	A = .10	A = .20	A = .30	A = .40	A = .50	A = .60	A = .70	A = .80	A = .90	A = 1.00
.01	.00000 .90175	.00004 .98175	.00007 .90175	.00011 .98175	.00015 .98175	.00014 .98175	.00022 .98175	.00025 .98175	.00029 .98175	.00033 .98175	.00036 .98175
.02	.00000 .96356	.00014 .96356	.00029 .96356	.00043 .96356	.00058 .96356	.00072 .96356	.00087 .96356	.00101 .96357	.00116 .96357	.00130 .96357	.00144 .96357
.03	.00000 .94549	.00032 .94549	.00065 .94549	.00097 .94549	.00129 .94550	.00161 .94550	.00193 .94551	.00226 .94551	.00258 .94552	.00290 .94553	.00322 .94554
.04	.00000 .92760	.00057 .92760	.00113 .92761	.00170 .92761	.00227 .92762	.00283 .92763	.00340 .92764	.00396 .92766	.00453 .92767	.00510 .92769	.00566 .92771
.05	.00000 .90994	.00087 .90995	.00175 .90995	.00262 .90996	.00349 .90998	.00436 .91000	.00523 .91002	.00610 .91005	.00697 .91008	.00784 .91011	.00871 .91015
.06	.00000 .89256	.00124 .89256	.00247 .89258	.00371 .89259	.00494 .89262	.00617 .89265	.00741 .89269	.00864 .89273	.00987 .89279	.01109 .89285	.01232 .89291
.07	.00000 .87550	.00165 .87550	.00330 .87552	.00495 .87554	.00659 .87558	.00824 .87563	.00988 .87569	.01152 .87576	.01316 .87584	.01480 .87593	.01643 .87603
.08	.00000 .85878	.00211 .85879	.00422 .85881	.00632 .85885	.00843 .85890	.01053 .85897	.01263 .85905	.01472 .85915	.01681 .85927	.01889 .85940	.02097 .85954
.09	.00000 .84244	.00251 .84245	.00521 .84248	.00781 .84253	.01041 .84260	.01301 .84270	.01560 .84281	.01819 .84295	.02076 .84312	.02334 .84328	.02590 .84348
.10	.00000 .82649	.00314 .82650	.00627 .82654	.00941 .82661	.01253 .82671	.01563 .82683	.01877 .82698	.02188 .82716	.02498 .82736	.02807 .82759	.03114 .82785

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+10)$$

K=SIN 15

1/B	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
.01	.00000 .98605	.00002 .98605	.00005 .98605	.00007 .98605	.00010 .98605	.00012 .98605	.00014 .98605	.00017 .98605	.00019 .98605	.00022 .98605	.00024 .98605
.02	.00000 .97211	.00010 .97211	.00019 .97211	.00029 .97211	.00039 .97212	.00048 .97212	.00053 .97212	.00062 .97212	.00077 .97212	.00087 .97212	.00096 .97212
.03	.00000 .95823	.00022 .95823	.00043 .95823	.00065 .95823	.00086 .95823	.00108 .95823	.00130 .95824	.00151 .95824	.00173 .95825	.00194 .95826	.00216 .95826
.04	.00000 .94440	.00038 .94440	.00076 .94441	.00115 .94441	.00153 .94442	.00191 .94442	.00229 .94442	.00267 .94444	.00305 .94446	.00343 .94447	.00381 .94449
.05	.00000 .93065	.00059 .93067	.00119 .93067	.00178 .93068	.00237 .93069	.00296 .93071	.00355 .93073	.00414 .93075	.00473 .93077	.00532 .93080	.00591 .93083
.06	.00000 .91703	.00085 .91704	.00169 .91704	.00254 .91706	.00338 .91708	.00423 .91710	.00507 .91714	.00591 .91717	.00676 .91722	.00760 .91726	.00843 .91732
.07	.00000 .90352	.00114 .90353	.00228 .90354	.00342 .90356	.00456 .90360	.00570 .90364	.00683 .90368	.00797 .90374	.00910 .90381	.01023 .90388	.01136 .90397
.08	.00000 .89016	.00147 .89016	.00295 .89018	.00442 .89021	.00589 .89026	.00736 .89032	.00882 .89039	.01029 .89047	.01175 .89057	.01320 .89068	.01465 .89080
.09	.00000 .87694	.00184 .87695	.00368 .87698	.00552 .87702	.00736 .87709	.00919 .87717	.01103 .87727	.01285 .87738	.01467 .87752	.01649 .87767	.01829 .87784
.10	.00000 .86390	.00224 .86391	.00449 .86395	.00673 .86401	.00896 .86409	.01120 .86420	.01342 .86433	.01564 .86449	.01785 .86467	.02006 .86487	.02225 .86509

$$\frac{U/K + IV/K'}{-1}$$

$$U + IV = SN \quad (A + IB)$$

$$K = \sin 2\theta$$

1/B	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
.01	.00000 .98833	.00002 .98833	.00004 .98833	.00005 .98833	.00007 .98833	.00009 .98833	.00011 .98833	.00013 .98833	.00014 .98833	.00016 .98833	.00018 .98833
.02	.00000 .97667	.00007 .97667	.00014 .97667	.00022 .97667	.00029 .97667	.00036 .97667	.00043 .97667	.00050 .97667	.00058 .97667	.00065 .97667	.00072 .97667
.03	.00000 .96503	.00016 .96503	.00032 .96503	.00049 .96503	.00065 .96503	.00081 .96504	.00097 .96504	.00113 .96504	.00129 .96505	.00145 .96505	.00162 .96506
.04	.00000 .95342	.00029 .95342	.00057 .95343	.00086 .95343	.00115 .95343	.00143 .95344	.00172 .95345	.00200 .95346	.00229 .95347	.00258 .95348	.00286 .95350
.05	.00000 .94181	.00045 .94186	.00089 .94187	.00134 .94187	.00178 .94188	.00223 .94190	.00267 .94191	.00312 .94193	.00356 .94195	.00401 .94196	.00445 .94200
.06	.00000 .93035	.00064 .93035	.00129 .93036	.00192 .93037	.00255 .93039	.00319 .93041	.00383 .93044	.00446 .93047	.00510 .93051	.00573 .93055	.00637 .93060
.07	.00000 .91891	.00086 .91891	.00173 .91892	.00259 .91894	.00345 .91897	.00432 .91900	.00518 .91905	.00604 .91909	.00689 .91915	.00775 .91922	.00860 .91929
.08	.00000 .90754	.00112 .90754	.00224 .90756	.00336 .90759	.00448 .90763	.00560 .90768	.00671 .90774	.00782 .90781	.00893 .90790	.01004 .90799	.01114 .90810
.09	.00000 .89625	.00141 .89626	.00282 .89628	.00422 .89632	.00563 .89636	.00703 .89645	.00843 .89653	.00982 .89663	.01121 .89675	.01260 .89689	.01398 .89703
.10	.00000 .88505	.00172 .88506	.00345 .88509	.00517 .88515	.00688 .88522	.00860 .88532	.01031 .88543	.01201 .88557	.01371 .88573	.01540 .88591	.01708 .88611

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

K=GIN 25

	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
1/8											
.01	.00000 .98975	.00001 .98975	.00003 .98975	.00004 .98975	.00005 .98975	.00007 .98975	.00009 .98975	.00010 .98975	.00011 .98975	.00013 .98975	.00014 .98975
.02	.00000 .97951	.00006 .97951	.00011 .97951	.00017 .97951	.00023 .97951	.00029 .97951	.00034 .97951	.00040 .97952	.00046 .97952	.00052 .97952	.00057 .97952
.03	.00000 .96928	.00013 .96928	.00026 .96929	.00039 .96929	.00051 .96929	.00064 .96929	.00077 .96929	.00090 .96930	.00103 .96930	.00116 .96931	.00129 .96931
.04	.00000 .95908	.00023 .95908	.00046 .95908	.00069 .95908	.00091 .95909	.00114 .95909	.00137 .95910	.00160 .95911	.00183 .95912	.00205 .95913	.00220 .95914
.05	.00000 .94890	.00036 .94890	.00071 .94890	.00107 .94891	.00142 .94892	.00178 .94893	.00213 .94894	.00249 .94896	.00284 .94898	.00320 .94900	.00355 .94902
.06	.00000 .93875	.00051 .93875	.00102 .93876	.00153 .93877	.00204 .93878	.00255 .93880	.00306 .93883	.00357 .93886	.00408 .93889	.00452 .93892	.00509 .93896
.07	.00000 .92864	.00069 .92864	.00136 .92865	.00208 .92867	.00277 .92870	.00346 .92873	.00414 .92876	.00483 .92881	.00552 .92886	.00620 .92892	.00689 .92898
.08	.00000 .91858	.00090 .91858	.00180 .91860	.00270 .91862	.00351 .91866	.00449 .91870	.00538 .91876	.00628 .91882	.00717 .91890	.00806 .91898	.00894 .91908
.09	.00000 .90857	.00113 .90857	.00226 .90860	.00339 .90863	.00452 .90868	.00565 .90874	.00677 .90882	.00790 .90891	.00901 .90902	.01013 .90914	.01124 .90927
.10	.00000 .89861	.00135 .89862	.00278 .89865	.00416 .89870	.00555 .89877	.00693 .89885	.00831 .89896	.00968 .89908	.01105 .89923	.01241 .89939	.01377 .89957

$$\frac{U/K + IV/K'}{-1}$$

$$U + IV = SN \quad (A + IB)$$

K = SIN 30

	A = 0.00	A = .10	A = .20	A = .30	A = .40	A = .50	A = .60	A = .70	A = .80	A = .90	A = 1.00
1/8											
.01	.06000 .99073	.00001 .99073	.00002 .99073	.00004 .99073	.00005 .99073	.00006 .99073	.00007 .99073	.00008 .99073	.00009 .99073	.00011 .99073	.00012 .99073
.02	.00000 .98146	.00005 .98146	.00009 .98146	.00014 .98146	.00019 .98146	.00024 .98146	.00028 .98146	.00033 .98146	.00038 .98146	.00043 .98146	.00047 .98147
.03	.00000 .97220	.00011 .97220	.00021 .97220	.00032 .97220	.00043 .97220	.00053 .97220	.00064 .97221	.00075 .97221	.00085 .97221	.00096 .97222	.00106 .97222
.04	.00300 .96295	.00019 .96295	.00038 .96295	.00057 .96296	.00076 .96296	.00094 .96297	.00113 .96297	.00132 .96298	.00151 .96299	.00170 .96300	.00189 .96301
.05	.00000 .95373	.00029 .95373	.00059 .95373	.00088 .95374	.00116 .95374	.00147 .95375	.00177 .95377	.00206 .95378	.00235 .95380	.00265 .95382	.00294 .95384
.06	.00000 .94452	.00042 .94452	.00085 .94453	.00127 .94454	.00169 .94455	.00211 .94457	.00254 .94459	.00296 .94462	.00338 .94465	.00380 .94468	.00422 .94472
.07	.00000 .93534	.00057 .93535	.00115 .93536	.00172 .93537	.00230 .93539	.00287 .93542	.00344 .93545	.00401 .93548	.00458 .93554	.00515 .93559	.00572 .93565
.08	.00000 .92620	.00075 .92620	.00149 .92622	.00224 .92624	.00299 .92627	.00373 .92631	.00447 .92636	.00522 .92642	.00596 .92649	.00669 .92657	.00743 .92665
.09	.00000 .91709	.00094 .91709	.00188 .91711	.00282 .91715	.00376 .91719	.00470 .91725	.00564 .91732	.00657 .91740	.00750 .91750	.00843 .91761	.00935 .91773
.10	.00000 .90802	.00116 .90803	.00231 .90805	.00347 .90810	.00462 .90816	.00577 .90824	.00692 .90833	.00807 .90845	.00921 .90858	.01034 .90873	.01147 .90889

$$\frac{U/K + IV/K'}{-1}$$

$$U + IV = SN \quad (A + IB)$$

K-SIN 35

	A = 0.00	A = .10	A = .20	A = .30	A = .40	A = .50	A = .60	A = .70	A = .80	A = .90	A = 1.00
1/8	.00000 .99143	.00001 .99143	.00002 .99143	.00003 .99143	.00004 .99143	.00005 .99143	.00006 .99143	.00007 .99143	.00008 .99143	.00009 .99143	.00010 .99143
.01	.00000 .98287	.00004 .98287	.00008 .98287	.00012 .98287	.00016 .98287	.00020 .98287	.00024 .98287	.00028 .98287	.00032 .98287	.00036 .98287	.00040 .98287
.02	.00000 .97431	.00009 .97431	.00018 .97431	.00027 .97431	.00036 .97431	.00045 .97431	.00054 .97431	.00063 .97431	.00072 .97431	.00081 .97431	.00090 .97431
.03	.00000 .96576	.00016 .96576	.00032 .96576	.00048 .96576	.00064 .96576	.00080 .96576	.00096 .96576	.00112 .96576	.00128 .96580	.00144 .96581	.00160 .96582
.04	.00000 .95723	.00025 .95723	.00050 .95723	.00075 .95724	.00100 .95725	.00125 .95726	.00150 .95727	.00175 .95728	.00200 .95730	.00225 .95732	.00250 .95734
.05	.00000 .94871	.00036 .94871	.00072 .94872	.00108 .94873	.00144 .94874	.00180 .94876	.00216 .94878	.00252 .94880	.00287 .94883	.00323 .94886	.00359 .94889
.06	.00000 .94022	.00049 .94022	.00098 .94023	.00147 .94024	.00195 .94026	.00244 .94029	.00293 .94032	.00341 .94036	.00390 .94040	.00438 .94045	.00486 .94050
.07	.00000 .93174	.00064 .93175	.00127 .93176	.00191 .93178	.00254 .93181	.00318 .93185	.00381 .93190	.00444 .93195	.00507 .93202	.00570 .93209	.00632 .93217
.08	.00000 .92330	.00080 .92331	.00160 .92332	.00241 .92335	.00321 .92340	.00401 .92345	.00480 .92352	.00560 .92359	.00639 .92368	.00718 .92379	.00796 .92390
.09	.00000 .91488	.00099 .91489	.00197 .91492	.00296 .91496	.00394 .91502	.00492 .91509	.00590 .91518	.00688 .91529	.00785 .91541	.00882 .91555	.00978 .91570

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 40$$

1/B	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
.01	.00000 .99196	.00001 .99196	.00002 .99196	.00003 .99196	.00003 .99196	.00004 .99196	.00005 .99196	.00006 .99196	.00007 .99196	.00008 .99196	.00009 .99196
.02	.00000 .98393	.00003 .98393	.00007 .98393	.00010 .98393	.00014 .98393	.00017 .98393	.00021 .98393	.00024 .98393	.00028 .98393	.00031 .98393	.00035 .98394
.03	.00000 .97590	.00008 .97590	.00016 .97590	.00023 .97590	.00031 .97590	.00039 .97590	.00047 .97590	.00055 .97590	.00063 .97590	.00070 .97590	.00078 .97592
.04	.00000 .96788	.00014 .96788	.00028 .96788	.00042 .96788	.00056 .96788	.00069 .96788	.00083 .96790	.00097 .96790	.00111 .96791	.00125 .96792	.00139 .96793
.05	.00000 .95987	.00022 .95987	.00043 .95987	.00065 .95988	.00087 .95989	.00108 .95989	.00130 .95991	.00152 .95992	.00173 .95993	.00195 .95995	.00216 .95997
.06	.00000 .95187	.00031 .95188	.00062 .95188	.00093 .95189	.00125 .95190	.00156 .95192	.00187 .95194	.00218 .95196	.00249 .95198	.00280 .95201	.00310 .95204
.07	.00000 .94389	.00042 .94390	.00085 .94390	.00127 .94392	.00169 .94394	.00211 .94396	.00253 .94399	.00295 .94403	.00337 .94407	.00379 .94411	.00421 .94416
.08	.00000 .93593	.00055 .93594	.00110 .93595	.00165 .93597	.00220 .93600	.00275 .93603	.00330 .93608	.00385 .93613	.00439 .93619	.00494 .93626	.00548 .93633
.09	.00000 .92799	.00070 .92800	.00139 .92802	.00209 .92804	.00278 .92808	.00347 .92814	.00416 .92820	.00485 .92827	.00554 .92836	.00622 .92845	.00690 .92856
.10	.00000 .92008	.00086 .92009	.00171 .92011	.00257 .92015	.00342 .92020	.00427 .92027	.00512 .92036	.00596 .92046	.00681 .92057	.00765 .92070	.00848 .92085

$$\frac{U/K+IV/K}{-1}$$

$$U+IV=SN \quad (A+IB)$$

K=SIN 45

1/B	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
.01	.00000 .99237	.00001 .99237	.00002 .99237	.00002 .99237	.00003 .99237	.00004 .99237	.00005 .99237	.00005 .99237	.00005 .99237	.00005 .99237	.00007 .99237	.00008 .99237
.02	.00000 .98475	.00003 .98475	.00006 .98475	.00009 .98475	.00012 .98475	.00015 .98475	.00018 .98475	.00021 .98475	.00021 .98475	.00024 .98475	.00027 .98475	.00030 .98475
.03	.00000 .97713	.00007 .97713	.00014 .97713	.00021 .97713	.00027 .97713	.00034 .97713	.00041 .97713	.00048 .97713	.00048 .97713	.00055 .97713	.00062 .97713	.00068 .97713
.04	.00000 .96951	.00012 .96951	.00024 .96952	.00037 .96952	.00049 .96952	.00061 .96953	.00073 .96953	.00085 .96954	.00085 .96954	.00097 .96955	.00109 .96955	.00122 .96956
.05	.00000 .96191	.00019 .96191	.00038 .96191	.00057 .96192	.00076 .96192	.00095 .96193	.00114 .96194	.00133 .96196	.00133 .96196	.00152 .96197	.00171 .96199	.00190 .96199
.06	.00000 .95432	.00027 .95432	.00055 .95432	.00082 .95433	.00109 .95434	.00136 .95436	.00164 .95438	.00191 .95440	.00191 .95440	.00218 .95442	.00245 .95445	.00272 .95448
.07	.00000 .94674	.00037 .94674	.00074 .94675	.00111 .94676	.00148 .94678	.0018 .94680	.00222 .94683	.00259 .94686	.00259 .94686	.00296 .94690	.00333 .94695	.00369 .94699
.08	.00000 .93917	.00048 .93918	.00097 .93919	.00145 .93921	.00193 .93923	.00241 .93927	.00289 .93931	.00337 .93936	.00337 .93936	.00385 .93942	.00433 .93948	.00481 .93955
.09	.00000 .93163	.00061 .93163	.00122 .93165	.00183 .93168	.00244 .93171	.00305 .93176	.00365 .93182	.00426 .93189	.00426 .93189	.00486 .93197	.00546 .93206	.00606 .93217
.10	.00000 .92410	.00075 .92411	.00150 .92413	.00225 .92417	.00300 .92422	.00375 .92429	.00449 .92437	.00524 .92446	.00524 .92446	.00598 .92457	.00671 .92470	.00744 .92484

$$U/K+IV/K' \\ U+IV=SN^{-1} (A+IB)$$

$$K=\sin 50$$

1/B	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
.01	.00000 .99269	.00001 .99269	.00001 .99269	.00002 .99269	.00003 .99269	.00003 .99269	.00004 .99269	.00005 .99269	.00005 .99269	.00006 .99269	.00007 .99270
.02	.00000 .98539	.00003 .98539	.00005 .98539	.00008 .98539	.00011 .98539	.00013 .98539	.00016 .98539	.00019 .98539	.00022 .98539	.00024 .98540	.00027 .98540
.03	.00000 .97809	.00006 .97809	.00012 .97809	.00018 .97809	.00024 .97809	.00030 .97810	.00036 .97810	.00042 .97810	.00048 .97810	.00055 .97811	.00061 .97811
.04	.00000 .97080	.00011 .97080	.00022 .97080	.00032 .97080	.00043 .97080	.00054 .97081	.00065 .97081	.00075 .97082	.00086 .97083	.00097 .97083	.00108 .97084
.05	.00000 .96351	.00017 .96351	.00034 .96351	.00050 .96352	.00067 .96353	.00084 .96353	.00101 .96354	.00117 .96356	.00134 .96357	.00151 .96358	.00168 .96360
.06	.00000 .95624	.00024 .95624	.00048 .95624	.00072 .95625	.00097 .95626	.00121 .95627	.00145 .95629	.00169 .95631	.00193 .95633	.00217 .95636	.00241 .95639
.07	.00000 .94897	.00033 .94897	.00066 .94898	.00098 .94899	.00131 .94901	.00164 .94903	.00197 .94905	.00229 .94909	.00262 .94913	.00294 .94917	.00327 .94922
.08	.00000 .94172	.00043 .94172	.00086 .94173	.00128 .94175	.00171 .94178	.00214 .94181	.00256 .94185	.00299 .94190	.00341 .94195	.00383 .94202	.00425 .94209
.09	.00000 .93448	.00054 .93449	.00108 .93451	.00162 .93453	.00216 .93457	.00270 .93461	.00323 .93467	.00377 .93474	.00430 .93482	.00483 .93490	.00536 .93500
.10	.00000 .92727	.00067 .92727	.00133 .92730	.00199 .92733	.00266 .92738	.00332 .92744	.00398 .92752	.00464 .92761	.00529 .92772	.00594 .92784	.00659 .92787

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN^{-1}(A+IB)$$

K=SN 55

	A= 0.00	A= .10	A= .20	A= .30	A= .40	A= .50	A= .60	A= .70	A= .80	A= .90	A=1.00
1/8											
.01	.00000 .99295	.00001 .99295	.00001 .99295	.00002 .99295	.00002 .99295	.00003 .99295	.00004 .99295	.00004 .99295	.00005 .99295	.00005 .99295	.00006 .99295
.02	.00000 .98590	.00002 .98590	.00005 .98590	.00007 .98590	.00010 .98590	.00012 .98590	.00014 .98590	.00017 .98590	.00019 .98590	.00022 .98590	.00024 .98591
.03	.00000 .97885	.00005 .97885	.00011 .97885	.00016 .97885	.00022 .97885	.00027 .97885	.00032 .97885	.00038 .97885	.00043 .97887	.00049 .97887	.00054 .97887
.04	.00000 .97181	.00010 .97181	.00019 .97181	.00029 .97182	.00038 .97182	.00049 .97182	.00057 .97183	.00067 .97184	.00077 .97184	.00086 .97185	.00096 .97186
.05	.00000 .96478	.00015 .96478	.00030 .96478	.00045 .96479	.00060 .96479	.00075 .96480	.00090 .96481	.00105 .96482	.00119 .96484	.00134 .96485	.00149 .96487
.06	.00000 .95775	.00022 .95776	.00043 .95776	.00064 .95777	.00086 .95778	.00107 .95779	.00129 .95781	.00150 .95783	.00172 .95785	.00193 .95788	.00214 .95790
.07	.00000 .95074	.00029 .95074	.00058 .95075	.00088 .95076	.00117 .95078	.00146 .95080	.00175 .95083	.00204 .95086	.00233 .95089	.00262 .95093	.00291 .95098
.08	.00000 .94374	.00038 .94374	.00076 .94375	.00114 .94377	.00152 .94379	.00190 .94383	.00228 .94387	.00266 .94391	.00304 .94396	.00341 .94402	.00379 .94409
.09	.00000 .93675	.00048 .93675	.00096 .93677	.00144 .93679	.00192 .93683	.00240 .93687	.00288 .93693	.00335 .93700	.00383 .93707	.00430 .93715	.00477 .93725
.10	.00000 .92978	.00055 .92978	.00118 .92980	.00178 .92984	.00237 .92989	.00296 .92995	.00354 .93002	.00413 .93011	.00471 .93021	.00529 .93033	.00587 .93046

$$\frac{U/K+IV/K'}{U+IV=SN^{-1}(A+IB)}$$

$$K=\sin 60$$

1/B	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
.01	.0000 .99315	.0001 .99315	.0001 .99315	.0002 .99115	.0002 .99315	.0003 .99315	.0003 .99315	.0004 .99315	.0004 .99315	.0005 .99315	.0005 .99315
.02	.0000 .98630	.0002 .98630	.0004 .98630	.0006 .98630	.0009 .98630	.0011 .98630	.0013 .98630	.0015 .98631	.0017 .98631	.0019 .98631	.0021 .98631
.03	.0000 .97946	.0005 .97946	.0010 .97946	.0014 .97946	.0019 .97946	.0024 .97945	.0029 .97946	.0034 .97947	.0038 .97947	.0043 .97947	.0048 .97948
.04	.0000 .97262	.0009 .97262	.0017 .97262	.0026 .97262	.0034 .97262	.0043 .97263	.0051 .97263	.0060 .97264	.0068 .97265	.0077 .97265	.0085 .97266
.05	.0000 .96578	.0013 .96579	.0027 .96579	.0040 .96579	.0053 .96580	.0067 .96581	.0080 .96581	.0093 .96583	.0107 .96584	.0120 .96585	.0133 .96587
.06	.0000 .95896	.0019 .95896	.0038 .95896	.0058 .95897	.0077 .95898	.0096 .95900	.0115 .95901	.0134 .95903	.0153 .95905	.0172 .95908	.0191 .95910
.07	.0000 .95214	.0026 .95214	.0052 .95215	.0078 .95216	.0104 .95218	.0130 .95220	.0156 .95223	.0182 .95225	.0208 .95229	.0234 .95233	.0260 .95237
.08	.0000 .94534	.0034 .94534	.0068 .94535	.0102 .94537	.0136 .94539	.0170 .94542	.0204 .94546	.0237 .94551	.0271 .94556	.0305 .94562	.0338 .94568
.09	.0000 .93855	.0043 .93855	.0086 .93856	.0129 .93859	.0172 .93862	.0214 .93867	.0257 .93872	.0300 .93878	.0342 .93886	.0384 .93894	.0425 .93903
.10	.0000 .93177	.0053 .93177	.0106 .93179	.0159 .93183	.0211 .93187	.0264 .93193	.0316 .93201	.0369 .93209	.0421 .93219	.0473 .93230	.0524 .93243

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 65$$

1/B	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
.01	.00000 .99331	.00000 .99331	.00001 .99331	.00001 .99331	.00002 .99331	.00002 .99331	.00003 .99331	.00003 .99331	.00004 .99331	.00004 .99331	.00005 .99331
.02	.00000 .98662	.00002 .98662	.00004 .98662	.00006 .98662	.00008 .98662	.00010 .98662	.00011 .98662	.00013 .98662	.00015 .98662	.00017 .98662	.00019 .98662
.03	.00000 .97993	.00004 .97993	.00009 .97993	.00013 .97993	.00017 .97994	.00021 .97994	.00026 .97994	.00030 .97994	.00034 .97994	.00039 .97995	.00043 .97995
.04	.00000 .97325	.00008 .97325	.00015 .97325	.00023 .97325	.00031 .97326	.00034 .97326	.00046 .97327	.00053 .97327	.00061 .97328	.00069 .97329	.00076 .97329
.05	.00000 .96657	.00017 .96658	.00024 .96658	.00036 .96658	.00048 .96659	.00060 .96660	.00071 .96660	.00083 .96662	.00095 .96663	.00107 .96664	.00119 .96666
.06	.00000 .95991	.00017 .95991	.00034 .95991	.00051 .95992	.00069 .95993	.00085 .95994	.00103 .95996	.00120 .95996	.00137 .96000	.00154 .96002	.00171 .96005
.07	.00000 .95325	.00023 .95325	.00047 .95326	.00070 .95327	.00093 .95328	.00116 .95330	.00140 .95333	.00163 .95336	.00186 .95339	.00209 .95343	.00232 .95347
.08	.00000 .94660	.00030 .94660	.00061 .94661	.00091 .94662	.00121 .94665	.00152 .94668	.00182 .94672	.00212 .94676	.00242 .94681	.00272 .94687	.00302 .94693
.09	.00000 .93996	.00039 .93996	.00077 .93998	.00115 .94000	.00153 .94003	.00191 .94004	.00230 .94013	.00268 .94019	.00305 .94026	.00343 .94034	.00381 .94043
.10	.00000 .93333	.00047 .93334	.00094 .93336	.00142 .93339	.00189 .93344	.00235 .93350	.00283 .93357	.00329 .93365	.00376 .93375	.00422 .93386	.00468 .93398

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 70$$

1/B	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
.01	.00000 .99343	.00001 .99343	.00001 .99343	.00001 .99343	.00002 .99343	.00002 .99343	.00003 .99343	.00003 .99343	.00003 .99343	.00004 .99343	.00004 .99343
.02	.00000 .98686	.00002 .98686	.00003 .98686	.00005 .98686	.00007 .98686	.00008 .98687	.00010 .98687	.00012 .98687	.00014 .98687	.00015 .98687	.00017 .98687
.03	.00000 .98030	.00004 .98030	.00008 .98030	.00011 .98030	.00015 .98030	.00019 .98030	.00023 .98031	.00027 .98031	.00031 .98031	.00034 .98031	.00030 .98032
.04	.00000 .97374	.00007 .97374	.00014 .97374	.00020 .97374	.00027 .97375	.00034 .97375	.00041 .97375	.00047 .97376	.00054 .97377	.00061 .97377	.00068 .97378
.05	.00000 .96718	.00011 .96719	.00021 .96719	.00032 .96719	.00042 .96720	.00053 .96721	.00064 .96721	.00074 .96722	.00085 .96724	.00095 .96725	.00106 .96727
.06	.00000 .96064	.00015 .96064	.00030 .96064	.00046 .96065	.00061 .96066	.00076 .96067	.00091 .96069	.00106 .96071	.00122 .96073	.00137 .96075	.00152 .96078
.07	.00000 .95410	.00021 .95410	.00041 .95411	.00062 .95412	.00083 .95413	.00103 .95415	.00124 .95418	.00145 .95421	.00165 .95424	.00186 .95428	.00206 .95432
.08	.00000 .94757	.00027 .94757	.00054 .94758	.00081 .94760	.00108 .94762	.00135 .94757	.00162 .94769	.00188 .94773	.00215 .94778	.00242 .94784	.00268 .94790
.09	.00000 .94105	.00034 .94105	.00066 .94107	.00102 .94109	.00136 .94112	.00170 .94117	.00204 .94122	.00238 .94128	.00272 .94135	.00305 .94143	.00339 .94152
.10	.00000 .93454	.00042 .93455	.00084 .93457	.00126 .93460	.00168 .93465	.00210 .93470	.00251 .93477	.00293 .93486	.00334 .93495	.00375 .93506	.00416 .93518

$$U/K+IV/K' \\ U+IV=SN^{-1} (A+IB)$$

$$K=\sin 75$$

1/B	A=0.00	A= .10	A= .20	A= .30	A= .40	A= .50	A= .60	A= .70	A= .80	A= .90	A=1.00
.01	.00000 .99352	.00000 .99352	.00001 .99352	.00001 .99352	.00001 .99352	.00002 .99352	.00002 .99352	.00003 .99352	.00003 .99352	.00003 .99352	.00004 .99352
.02	.00000 .98705	.00001 .98705	.00003 .98705	.00004 .98705	.00006 .98705	.00007 .98705	.00009 .98705	.00010 .98705	.00012 .98705	.00013 .98705	.00015 .98705
.03	.00000 .98057	.00003 .98057	.00007 .98057	.00010 .98057	.00013 .98057	.00017 .98058	.00020 .98058	.00024 .98058	.00027 .98058	.00030 .98059	.00034 .98059
.04	.00000 .97410	.00006 .97410	.00012 .97410	.00018 .97411	.00024 .97411	.00030 .97411	.00036 .97412	.00042 .97412	.00048 .97413	.00054 .97414	.00060 .97414
.05	.00000 .96764	.00009 .96764	.00019 .96764	.00028 .96765	.00037 .96765	.00047 .96766	.00056 .96767	.00065 .96768	.00074 .96769	.00084 .96770	.00093 .96772
.06	.00000 .96118	.00013 .96118	.00027 .96119	.00040 .96119	.00054 .96120	.00067 .96121	.00080 .96123	.00094 .96125	.00107 .96127	.00120 .96129	.00134 .96132
.07	.00000 .95473	.00018 .95473	.00036 .95474	.00055 .95475	.00073 .95477	.00091 .95479	.00109 .95481	.00127 .95484	.00145 .95487	.00163 .95491	.00181 .95495
.08	.00000 .94829	.00024 .94829	.00048 .94830	.00071 .94832	.00095 .94834	.00119 .94837	.00142 .94841	.00166 .94845	.00189 .94850	.00213 .94855	.00236 .94862
.09	.00000 .94186	.00030 .94186	.00060 .94186	.00090 .94190	.00120 .94193	.00150 .94193	.00180 .94203	.00209 .94209	.00239 .94216	.00269 .94223	.00298 .94232
.10	.00000 .93544	.00037 .93545	.00074 .93547	.00111 .93550	.00148 .93554	.00185 .93560	.00221 .93567	.00258 .93575	.00294 .93585	.00331 .93595	.00367 .93607

$$\frac{U/K + iV/K'}{-1}$$

$$U + iV = \sin^{-1} (A + iB)$$

K = SIN 80

1/B	A = 0.00	A = .10	A = .20	A = .30	A = .40	A = .50	A = .60	A = .70	A = .80	A = .90	A = 1.00
.01	.00000 .99359	.00000 .99359	.00001 .99359	.00001 .99359	.00001 .99359	.00002 .99359	.00002 .99359	.00002 .99359	.00003 .99359	.00003 .99359	.00003 .99359
.02	.00000 .98717	.00001 .98717	.00003 .98717	.00004 .98717	.00005 .98717	.00006 .98717	.00006 .98717	.00009 .98717	.00010 .98717	.00012 .98718	.00013 .98718
.03	.00000 .98076	.00003 .98076	.00006 .98076	.00009 .98076	.00012 .98076	.00014 .98076	.00017 .98077	.00020 .98077	.00023 .98077	.00026 .98077	.00029 .98078
.04	.00000 .97435	.00005 .97435	.00010 .97435	.00015 .97436	.00021 .97436	.00036 .97436	.00031 .97437	.00036 .97437	.00041 .97438	.00045 .97439	.00051 .97439
.05	.00000 .96795	.00008 .96795	.00016 .96795	.00024 .96796	.00032 .96796	.00040 .96797	.00048 .96798	.00056 .96799	.00064 .96800	.00072 .96802	.00080 .96803
.06	.00000 .96156	.00012 .96156	.00023 .96156	.00035 .96157	.00046 .96158	.00058 .96159	.00069 .96161	.00081 .96162	.00092 .96164	.00104 .96167	.00115 .96169
.07	.00000 .95517	.00016 .95517	.00031 .95518	.00047 .95519	.00053 .95520	.00079 .95522	.00094 .95525	.00111 .95527	.00125 .95531	.00141 .95534	.00156 .95538
.08	.00000 .94879	.00020 .94879	.00041 .94880	.00061 .94882	.00082 .94884	.00102 .94887	.00123 .94891	.00143 .94895	.00163 .94900	.00183 .94905	.00203 .94911
.09	.00000 .94242	.00026 .94243	.00052 .94244	.00078 .94246	.00103 .94249	.00129 .94254	.00155 .94259	.00180 .94265	.00206 .94271	.00231 .94279	.00257 .94288
.10	.00000 .93606	.00032 .93607	.00064 .93609	.00096 .93612	.00127 .93616	.00159 .93622	.00191 .93629	.00222 .93637	.00253 .93646	.00285 .93657	.00316 .93669

$$\frac{U/K+IV/K'}{A+10}$$

$$U+IV=SN$$

$$K=\sin 85$$

1/9	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
.01	.00000 .99362	.00000 .99362	.00001 .99362	.00001 .99362	.00001 .99362	.00001 .99362	.00002 .99362	.00002 .99362	.00002 .99362	.00002 .99362	.00003 .99362
.02	.00000 .98725	.00001 .98725	.00002 .98725	.00003 .98725	.00004 .98725	.00005 .98725	.00006 .98725	.00007 .98725	.00008 .98725	.00009 .98725	.00010 .98725
.03	.00000 .98087	.00002 .98087	.00005 .98087	.00007 .98087	.00009 .98087	.00012 .98087	.00014 .98087	.00016 .98087	.00019 .98087	.00021 .98087	.00024 .98087
.04	.00000 .97450	.00004 .97450	.00008 .97450	.00013 .97450	.00017 .97450	.00021 .97450	.00025 .97450	.00029 .97450	.00033 .97450	.00038 .97450	.00042 .97450
.05	.00000 .96813	.00007 .96813	.00013 .96813	.00020 .96813	.00026 .96813	.00033 .96813	.00039 .96813	.00046 .96813	.00052 .96813	.00059 .96813	.00065 .96813
.06	.00000 .96176	.00009 .96176	.00013 .96176	.00020 .96176	.00026 .96176	.00033 .96176	.00039 .96176	.00046 .96176	.00052 .96176	.00059 .96176	.00065 .96176
.07	.00000 .95542	.00013 .95542	.00026 .95542	.00038 .95542	.00051 .95542	.00066 .95542	.00077 .95542	.00089 .95542	.00102 .95542	.00115 .95542	.00127 .95542
.08	.00000 .94908	.00017 .94908	.00033 .94908	.00050 .94908	.00067 .94908	.00083 .94908	.00100 .94908	.00116 .94908	.00133 .94908	.00149 .94908	.00166 .94908
.09	.00000 .94275	.00021 .94275	.00042 .94275	.00063 .94275	.00084 .94275	.00105 .94275	.00126 .94275	.00147 .94275	.00168 .94275	.00188 .94275	.00209 .94275
.10	.00000 .93643	.00026 .93643	.00052 .93643	.00078 .93643	.00104 .93643	.00129 .93643	.00155 .93643	.00181 .93643	.00206 .93643	.00232 .93643	.00257 .93643

$$\frac{U/K + IV/K'}{-1}$$

$$U + IV = SN \quad (A + IB)$$

$$K = \sin 86$$

1/8	A = 0.00	A = .10	A = .20	A = .30	A = .40	A = .50	A = .60	A = .70	A = .80	A = .90	A = 1.00
.01	.00000 .99363	.00000 .99363	.00000 .99363	.00001 .99363	.00001 .99363	.00001 .99363	.00001 .99363	.00002 .99363	.00002 .99363	.00002 .99363	.00002 .99363
.02	.00000 .98725	.00001 .98725	.00002 .98725	.00003 .98725	.00004 .98725	.00005 .98726	.00006 .98726	.00007 .98726	.00008 .98726	.00009 .98726	.00010 .98726
.03	.00000 .98088	.00002 .98088	.00004 .98088	.00007 .98089	.00009 .98089	.00011 .98089	.00013 .98089	.00016 .98089	.00018 .98089	.00020 .98090	.00022 .98090
.04	.00000 .97452	.00004 .97452	.00008 .97452	.00012 .97452	.00016 .97452	.00020 .97453	.00024 .97453	.00028 .97454	.00032 .97454	.00036 .97455	.00039 .97456
.05	.00001 .96815	.00006 .96816	.00012 .96815	.00019 .96816	.00025 .96817	.00031 .96818	.00037 .96819	.00043 .96820	.00049 .96821	.00055 .96822	.00062 .96824
.06	.00000 .96180	.00009 .96180	.00019 .96181	.00027 .96181	.00035 .96182	.00044 .96184	.00053 .96185	.00062 .96187	.00071 .96189	.00080 .96191	.00088 .96194
.07	.00000 .95546	.00012 .95546	.00024 .95546	.00036 .95547	.00048 .95549	.00060 .95551	.00072 .95553	.00084 .95556	.00096 .95559	.00108 .95563	.00120 .95567
.08	.00000 .94912	.00016 .94912	.00031 .94913	.00047 .94915	.00063 .94917	.00079 .94920	.00094 .94923	.00110 .94927	.00125 .94932	.00141 .94938	.00156 .94944
.09	.00000 .94279	.00020 .94279	.00040 .94281	.00060 .94283	.00079 .94286	.00099 .94290	.00119 .94295	.00139 .94301	.00158 .94308	.00178 .94316	.00197 .94324
.10	.00000 .93647	.00024 .93648	.00049 .93650	.00073 .93653	.00098 .93657	.00122 .93663	.00146 .93670	.00171 .93676	.00195 .93687	.00219 .93697	.00243 .93709

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN(A+IB)$$

K=SIN 87

1/B	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
.01	.00000 .99363	.00000 .99363	.00000 .99363	.00001 .99363	.00001 .99363	.00001 .99363	.00001 .99363	.00002 .99363	.00002 .99363	.00002 .99363	.00002 .99363
.02	.00000 .98726	.00001 .98726	.00002 .98726	.00003 .98726	.00004 .98726	.00005 .98726	.00006 .98726	.00006 .98726	.00007 .98726	.00008 .98726	.00009 .98727
.03	.00000 .98089	.00002 .98089	.00004 .98089	.00006 .98090	.00008 .98090	.00010 .98090	.00012 .98090	.00015 .98090	.00017 .98091	.00019 .98091	.00021 .98091
.04	.00000 .97453	.00004 .97453	.00007 .97453	.00011 .97453	.00015 .97454	.00018 .97454	.00022 .97455	.00026 .97455	.00029 .97456	.00033 .97456	.00037 .97457
.05	.00000 .96817	.00006 .96817	.00012 .96818	.00017 .96818	.00023 .96819	.00029 .96819	.00035 .96820	.00040 .96821	.00046 .96822	.00052 .96824	.00057 .96825
.06	.00000 .96182	.00008 .96182	.00017 .96183	.00025 .96183	.00033 .96184	.00041 .96186	.00050 .96187	.00058 .96189	.00066 .96191	.00074 .96193	.00082 .96196
.07	.00000 .95548	.00011 .95548	.00023 .95549	.00034 .95550	.00045 .95551	.00056 .95553	.00067 .95556	.00079 .95558	.00090 .95562	.00101 .95565	.00112 .95569
.08	.00000 .94914	.00015 .94915	.00029 .94916	.00044 .94917	.00059 .94920	.00073 .94922	.00088 .94926	.00102 .94930	.00117 .94935	.00131 .94940	.00146 .94946
.09	.00000 .94282	.00019 .94282	.00027 .94284	.00056 .94286	.00074 .94289	.00093 .94293	.00111 .94298	.00129 .94304	.00148 .94311	.00166 .94319	.00184 .94327
.10	.00000 .93651	.00023 .93651	.00046 .93653	.00068 .93656	.00091 .93661	.00114 .93666	.00137 .93673	.00159 .93681	.00182 .93690	.00204 .93701	.00226 .93712

$$\frac{U/K+IV/K'}{-1}$$

$$U+TV=SN \quad (A+IB)$$

K=SIN 88

1/B	A=1.00	A=.90	A=.80	A=.70	A=.60	A=.50	A=.40	A=.30	A=.20	A=.10	A=0.00
.01	.00000 .99363	.00002 .99363	.00002 .99363	.00001 .99363	.00001 .99363	.00001 .99363	.00001 .99363	.00001 .99363	.00000 .99363	.00000 .99363	.00000 .99363
.02	.00000 .98727	.00008 .98727	.00007 .98727	.00006 .98727	.00005 .98727	.00004 .98727	.00003 .98727	.00003 .98727	.00002 .98727	.00001 .98727	.00000 .98727
.03	.00000 .98090	.00017 .98092	.00015 .98091	.00013 .98091	.00011 .98091	.00009 .98091	.00008 .98090	.00006 .98090	.00004 .98090	.00002 .98090	.00000 .98090
.04	.00000 .97454	.00034 .97458	.00027 .97457	.00024 .97456	.00020 .97456	.00017 .97455	.00013 .97455	.00010 .97454	.00007 .97454	.00003 .97454	.00000 .97454
.05	.00000 .96819	.00052 .96826	.00047 .96825	.00037 .96822	.00032 .96821	.00026 .96821	.00021 .96820	.00016 .96819	.00011 .96819	.00005 .96819	.00000 .96819
.06	.00000 .96184	.00075 .96197	.00068 .96195	.00053 .96190	.00045 .96189	.00038 .96187	.00030 .96186	.00023 .96185	.00015 .96184	.00008 .96184	.00000 .96184
.07	.00000 .95550	.00102 .95571	.00092 .95567	.00072 .95560	.00062 .95557	.00051 .95555	.00041 .95553	.00031 .95552	.00021 .95550	.00010 .95550	.00000 .95550
.08	.00000 .94916	.00133 .94948	.00120 .94942	.00094 .94932	.00080 .94928	.00067 .94924	.00054 .94921	.00040 .94919	.00027 .94918	.00013 .94917	.00000 .94916
.09	.00000 .94284	.00168 .94329	.00152 .94321	.00116 .94306	.00101 .94300	.00085 .94295	.00068 .94291	.00051 .94288	.00034 .94286	.00017 .94285	.00000 .94284
.10	.00000 .93653	.00207 .93715	.00187 .93703	.00146 .93683	.00125 .93675	.00104 .93669	.00083 .93663	.00063 .93659	.00042 .93655	.00021 .93654	.00000 .93653

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 89$$

1/8	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
.01	.00000 .99363	.00000 .99363	.00000 .99363	.00001 .99363	.00001 .99363	.00001 .99363	.00001 .99363	.00001 .99363	.00001 .99363	.00002 .99363	.00002 .99363
.02	.00000 .98727	.00001 .98727	.00001 .98727	.00002 .98727	.00003 .98727	.00004 .98727	.00004 .98727	.00005 .98727	.00006 .98727	.00007 .98727	.00007 .98727
.03	.00000 .98091	.00002 .98091	.00003 .98091	.00005 .98091	.00007 .98091	.00009 .98091	.00010 .98091	.00012 .98091	.00013 .98092	.00015 .98092	.00017 .98092
.04	.00000 .97455	.00003 .97455	.00006 .97455	.00009 .97455	.00012 .97455	.00015 .97455	.00018 .97455	.00021 .97457	.00023 .97457	.00026 .97458	.00029 .97459
.05	.00000 .96819	.00005 .96819	.00009 .96820	.00014 .96820	.00018 .96821	.00021 .96821	.00024 .96822	.00028 .96823	.00032 .96824	.00041 .96826	.00046 .96827
.06	.00000 .96185	.00007 .96185	.00013 .96185	.00020 .96186	.00026 .96187	.00033 .96181	.00040 .96189	.00046 .96191	.00053 .96193	.00059 .96196	.00066 .96198
.07	.00000 .95551	.00009 .95551	.00018 .95551	.00027 .95553	.00036 .95554	.00045 .95556	.00054 .95558	.00063 .95561	.00072 .95564	.00080 .95568	.00089 .95572
.08	.00000 .94917	.00012 .94918	.00023 .94919	.00035 .94920	.00047 .94923	.00053 .94925	.00070 .94929	.00082 .94933	.00093 .94938	.00105 .94943	.00116 .94949
.09	.00000 .94285	.00015 .94286	.00030 .94287	.00044 .94289	.00059 .94293	.00074 .94297	.00088 .94302	.00103 .94308	.00118 .94314	.00132 .94322	.00147 .94331
.10	.00000 .93654	.00018 .93655	.00036 .93657	.00055 .93660	.00073 .93664	.00091 .93670	.00109 .93677	.00127 .93685	.00145 .93694	.00163 .93705	.00180 .93716

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

K=SIN 5

1/B	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
.10	.00000 .74414	.00477 .74415	.00953 .74419	.01429 .74426	.01905 .74436	.02380 .74443	.02855 .74464	.03328 .74482	.03801 .74503	.04273 .74526	.04743 .74552
.20	.00000 .59278	.01142 .59283	.02284 .59299	.03423 .59325	.04560 .59362	.05693 .59409	.06821 .59466	.07944 .59533	.09061 .59611	.10170 .59698	.11272 .59795
.30	.00000 .49615	.01753 .49625	.03507 .49658	.05248 .49711	.06985 .49786	.08712 .49881	.10425 .49997	.12123 .50133	.13804 .50289	.15465 .50464	.17104 .50657
.40	.00000 .42742	.02305 .42759	.04605 .42810	.06894 .42896	.09168 .43015	.11422 .43167	.13650 .43351	.15850 .43566	.18015 .43811	.20142 .44086	.22228 .44387
.50	.00000 .37527	.02798 .37551	.05580 .37623	.08362 .37741	.11113 .37906	.13832 .38116	.16513 .38371	.19147 .38668	.21729 .39005	.24252 .39382	.26711 .39794
.60	.00000 .33406	.03233 .33438	.06456 .33528	.09659 .33678	.12829 .33887	.15958 .34153	.19035 .34475	.22050 .34851	.24993 .35278	.27853 .35754	.30630 .36274
.70	.00000 .30063	.03614 .30099	.07216 .30206	.10793 .30384	.14333 .30632	.17823 .30948	.21249 .31332	.24600 .31781	.27860 .32232	.31019 .32661	.34065 .33484
.80	.00000 .27293	.03944 .27333	.07875 .27454	.11779 .27655	.15644 .27937	.19453 .28297	.23190 .28736	.26840 .29251	.30384 .29839	.33807 .30494	.37092 .31213
.90	.00000 .24962	.04229 .25006	.08445 .25138	.12535 .25358	.16784 .25667	.20875 .26065	.24892 .26551	.28811 .27124	.32612 .27781	.36273 .28516	.39774 .29324
1.00	.00000 .22376	.04474 .23022	.08937 .23163	.13376 .23398	.17776 .23729	.22119 .24157	.26386 .24683	.30551 .25307	.34588 .26025	.38468 .26834	.42165 .27725

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN^{-1}(A+IB)$$

$$K=\sin 10$$

1/B	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
.10	.00000 .82649	.00314 .82650	.00627 .82654	.00941 .82661	.01253 .82671	.01566 .82683	.01877 .82698	.02188 .82716	.02498 .82736	.02807 .82759	.03114 .82785
.20	.00000 .68954	.00335 .68961	.01070 .68980	.02802 .69013	.03731 .69058	.04656 .69117	.05576 .69188	.06490 .69272	.07397 .69368	.08296 .69476	.09186 .69596
.30	.00000 .58799	.01371 .58813	.03139 .58854	.04764 .58923	.06255 .59019	.07797 .59142	.09326 .59291	.10839 .59466	.12332 .59657	.13805 .59892	.15254 .60140
.40	.00000 .51106	.02151 .51128	.04297 .51194	.06433 .51303	.08552 .51456	.10651 .51651	.12723 .51838	.14765 .52165	.16772 .52480	.18739 .52833	.20664 .53222
.50	.00000 .45090	.02668 .45121	.05327 .45212	.07970 .45363	.10590 .45573	.13177 .45841	.15724 .46166	.18225 .46546	.20672 .46978	.23059 .47459	.25379 .47988
.60	.00000 .40250	.03121 .40298	.06231 .40412	.09319 .40582	.12376 .40867	.15391 .41205	.18353 .41614	.21252 .42091	.24079 .42634	.26824 .43240	.29479 .43903
.70	.00000 .36299	.03514 .36344	.07016 .36479	.10494 .36704	.13934 .37017	.17323 .37417	.20649 .37902	.23898 .38470	.27056 .39117	.30112 .39838	.33054 .40628
.80	.00000 .32998	.03855 .33048	.07696 .33201	.11512 .33454	.15287 .33808	.19006 .34262	.22654 .34815	.26213 .35464	.29666 .36205	.32997 .37033	.36190 .37941
.90	.00000 .30208	.04148 .30263	.08283 .30429	.12392 .30706	.16460 .31094	.20471 .31594	.24406 .32204	.28244 .32925	.31963 .33751	.35542 .34676	.38960 .35694
1.00	.00000 .27324	.04400 .27383	.08788 .28059	.13152 .28353	.17478 .28768	.21748 .29305	.25941 .29965	.30032 .30747	.33995 .31649	.37801 .32664	.41423 .33784

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 15$$

1/B	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
.10	.00000 .86390	.00224 .86391	.00449 .86395	.00673 .86401	.00896 .86409	.01120 .86420	.01342 .86433	.01564 .86449	.01785 .86467	.02006 .86487	.02225 .86509
.20	.00000 .74463	.00720 .74470	.01499 .74491	.02246 .74525	.02990 .74573	.03730 .74634	.04464 .74709	.05192 .74797	.05913 .74898	.06625 .75011	.07328 .75137
.30	.00000 .64709	.01361 .64725	.02719 .64773	.04070 .64851	.05413 .64962	.06743 .65102	.08059 .65273	.09356 .65473	.10634 .65702	.11888 .65959	.13116 .66243
.40	.00000 .56858	.01950 .56884	.03895 .56962	.05827 .57092	.07743 .57272	.09637 .57503	.11502 .57782	.13334 .58110	.15129 .58482	.16881 .58899	.18586 .59358
.50	.00000 .50497	.02484 .50534	.04959 .50642	.07417 .50823	.09849 .51074	.12248 .51394	.14605 .51782	.16912 .52235	.19162 .52752	.21348 .53327	.23464 .53960
.60	.00000 .45279	.02954 .45325	.05897 .45462	.08819 .45689	.11707 .46005	.14551 .46409	.17340 .46899	.20063 .47471	.22710 .48122	.25272 .48849	.27739 .49645
.70	.00000 .40942	.03364 .40996	.06714 .41157	.10040 .41425	.13327 .41799	.16561 .42278	.19730 .42859	.22819 .43539	.25815 .44314	.28705 .45180	.31475 .46128
.80	.00000 .37293	.03717 .37354	.07421 .37535	.11097 .37838	.14732 .38261	.18311 .38803	.21815 .39464	.25229 .40240	.28535 .41128	.31714 .42120	.34752 .43209
.90	.00000 .34191	.04021 .34257	.08029 .34454	.12010 .34784	.15950 .35247	.19831 .35843	.23635 .36572	.27341 .37432	.30925 .38419	.34366 .39527	.37642 .40746
1.00	.00000 .31527	.04282 .31597	.08552 .31806	.12797 .32157	.17005 .32651	.21155 .33291	.25227 .34077	.29137 .35009	.33036 .36086	.36715 .37299	.40207 .38638

$$\frac{U/K+IV/K'}{U+IV=SN^{-1}} (A+IB)$$

$$K=\sin 2\theta$$

	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
1/8											
.10	.00000 .88505	.00172 .88506	.00345 .88509	.00517 .88515	.00688 .88522	.00860 .88532	.01031 .88543	.01201 .88557	.01371 .88573	.01540 .88591	.01708 .88611
.20	.00000 .77951	.00611 .77958	.01221 .77978	.01829 .78012	.02434 .78059	.03034 .78111	.03630 .78192	.04220 .78278	.04803 .78376	.05378 .78487	.05945 .78609
.30	.00000 .68808	.01169 .68825	.02335 .68875	.03495 .68959	.04645 .69075	.05782 .69224	.06904 .69405	.08007 .69617	.09090 .69858	.10146 .70129	.11180 .70427
.40	.00000 .61099	.01741 .61128	.03477 .61214	.05200 .61358	.06904 .61559	.08585 .61811	.10235 .62124	.11851 .62486	.13425 .62897	.14954 .63357	.16433 .63862
.50	.00000 .54648	.02277 .54689	.04545 .54812	.06794 .55017	.09016 .55302	.11202 .55666	.13342 .56106	.15429 .56620	.17455 .57205	.19411 .57857	.21291 .58572
.60	.00000 .49238	.02757 .49290	.05502 .49448	.08224 .49709	.10911 .50072	.13551 .50537	.16131 .51099	.18641 .51757	.21069 .52505	.23405 .53339	.25638 .54253
.70	.00000 .44673	.03178 .44736	.06343 .44922	.09481 .45232	.12578 .45665	.15620 .46213	.18591 .46890	.21478 .47677	.24265 .48574	.26939 .49575	.29484 .50674
.80	.00000 .40793	.03543 .40863	.07073 .41074	.10574 .41424	.14031 .41914	.17428 .42544	.20748 .43311	.23972 .44212	.27081 .45242	.30056 .46395	.3290 .47563
.90	.00000 .37460	.03858 .37545	.07702 .37774	.11519 .38157	.15292 .38694	.19004 .39386	.22635 .40233	.26162 .41233	.29562 .42382	.32811 .43672	.35886 .45094
1.00	.00000 .34598	.04128 .34679	.08244 .34922	.12335 .35329	.16385 .35903	.20377 .36646	.24287 .37560	.28090 .38645	.31756 .39898	.35256 .41312	.38560 .42876

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+B)$$

$$K=\sin 25$$

1/B	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
.10	.00000 .89861	.00139 .89862	.00278 .89865	.00415 .89870	.00555 .89877	.00693 .89885	.00831 .89896	.00968 .89908	.01105 .89923	.01241 .89939	.01377 .89957
.20	.00000 .89326	.00509 .80332	.01016 .80352	.01522 .80384	.02025 .80429	.02524 .80486	.03019 .80556	.03509 .80638	.03992 .80732	.04468 .80837	.04936 .80954
.30	.00000 .71173	.01008 .71790	.02013 .71841	.03012 .71926	.04001 .72044	.04978 .72195	.05940 .72378	.06883 .72592	.07806 .72836	.08705 .73109	.09578 .73408
.40	.00000 .64320	.01547 .64351	.03088 .64443	.04616 .64595	.06125 .64807	.07603 .65078	.09062 .65405	.10478 .65787	.11855 .66220	.13180 .66703	.14456 .67232
.50	.00000 .57916	.02070 .57961	.04129 .58096	.06170 .58319	.08131 .58630	.10154 .59026	.12078 .59505	.13946 .60063	.15748 .60697	.17477 .61402	.19125 .62173
.60	.00000 .52439	.02549 .52497	.05085 .52672	.07596 .52962	.10029 .53365	.12491 .53880	.14850 .54504	.17133 .55231	.19328 .56058	.21424 .56978	.23410 .57984
.70	.00000 .47750	.02975 .47820	.05935 .48029	.08866 .48377	.11733 .48862	.14581 .49483	.17333 .50236	.19994 .51118	.22547 .52122	.24976 .53242	.27268 .54469
.80	.00000 .43720	.03347 .43799	.06679 .44037	.09981 .44433	.13235 .44987	.16425 .45699	.19532 .46565	.22535 .47573	.25413 .48746	.28147 .50048	.30717 .51477
.90	.00000 .40240	.03670 .40326	.07325 .40586	.10950 .41021	.14529 .41630	.18042 .42416	.21467 .43378	.24782 .44414	.27959 .45619	.30973 .47284	.33798 .48895
1.00	.00000 .37216	.03948 .37308	.07883 .37585	.11790 .38048	.15655 .38702	.19456 .39548	.23169 .40589	.26768 .41826	.30221 .43254	.33494 .44868	.36555 .46652

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 30$$

1/8	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
.10	.00000 .90802	.00116 .90803	.00231 .90805	.00347 .90810	.00462 .90816	.00577 .90824	.00692 .90833	.00807 .90845	.00921 .90858	.01034 .90873	.01147 .90889
.20	.00000 .82030	.00432 .82036	.00863 .82054	.01292 .82085	.01719 .82128	.02143 .82183	.02563 .82249	.02977 .82327	.03386 .82416	.03789 .82517	.04185 .82628
.30	.00000 .73988	.00876 .74005	.01750 .74056	.02617 .74140	.03476 .74258	.04322 .74408	.05154 .74589	.05969 .74801	.06764 .75041	.07537 .75310	.08285 .75685
.40	.00000 .65817	.01375 .65849	.02744 .65943	.04100 .67100	.05437 .67319	.06749 .67597	.08029 .67932	.09274 .68322	.10476 .68765	.11632 .69257	.12737 .69794
.50	.00000 .58528	.01874 .60575	.03738 .60710	.05582 .60954	.07395 .61283	.09169 .61701	.10893 .62205	.12558 .62792	.14156 .63456	.15678 .64193	.17118 .64996
.60	.00000 .55058	.02342 .55120	.04671 .55309	.06974 .55622	.09236 .56057	.11444 .56611	.13586 .57281	.15647 .58061	.17616 .58946	.19488 .59927	.21228 .60996
.70	.00000 .50312	.02766 .50389	.05516 .50618	.08235 .50998	.10906 .51529	.13514 .52207	.16041 .53026	.18469 .53988	.20783 .55079	.22964 .56292	.24997 .57617
.80	.00000 .46193	.03140 .46280	.06263 .46543	.09354 .46980	.12393 .47592	.15363 .48376	.18242 .49331	.21089 .50451	.23842 .51738	.26110 .53158	.28416 .54721
.90	.00000 .42607	.03466 .42703	.06917 .42992	.10335 .43475	.13702 .44151	.16997 .45026	.20198 .46094	.23277 .47354	.26207 .48801	.28959 .50423	.31586 .52287
1.00	.00000 .39472	.03749 .39575	.07485 .39884	.11190 .40401	.14848 .41131	.18436 .42076	.21929 .43239	.25297 .44620	.28505 .46214	.31517 .48013	.34297 .50088

$$\frac{U/K+18A^2}{-1}$$

$$U+IV=SN \quad (M+8)$$

$$K=\sin 25$$

	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
1/8											
.10	.00000 .91488	.00399 .91489	.00197 .91492	.00296 .91496	.00394 .91502	.00492 .91508	.00591 .91518	.00688 .91529	.00785 .91541	.00882 .91555	.00978 .91578
.20	.00000 .83301	.00373 .83307	.00745 .83324	.01116 .83354	.01484 .83395	.01853 .83447	.02211 .83510	.02569 .83585	.02921 .83678	.03268 .83785	.03609 .83871
.30	.00000 .75686	.00769 .75703	.01535 .75753	.02295 .75836	.03047 .75952	.03783 .76099	.04515 .76276	.05226 .76484	.05918 .76728	.06598 .76982	.07248 .77278
.40	.00000 .68784	.01226 .68816	.02446 .68912	.03653 .69071	.04842 .69291	.06006 .69572	.07140 .69910	.08238 .70382	.09296 .70747	.10309 .71239	.11273 .71775
.50	.00000 .62635	.01696 .62685	.03381 .62832	.05040 .63077	.06680 .63417	.08278 .63843	.09818 .64368	.11383 .64972	.12721 .65653	.14864 .66486	.15325 .67223
.60	.00000 .57214	.02146 .57280	.04278 .57479	.06382 .57809	.08445 .58267	.10522 .58851	.12389 .59554	.14245 .60371	.16885 .61294	.17659 .62315	.19195 .63422
.70	.00000 .52457	.02559 .52539	.05102 .52784	.07612 .53191	.10073 .53758	.12465 .54482	.14773 .55357	.16977 .56377	.19868 .57533	.21886 .58814	.22798 .60285
.80	.00000 .48290	.02930 .48384	.05842 .48668	.08718 .49142	.11540 .49803	.14287 .50643	.16937 .51678	.19468 .52883	.21856 .54255	.24877 .55781	.26118 .57444
.90	.00000 .44635	.03256 .44740	.06494 .45055	.09697 .45582	.12845 .46320	.15715 .47271	.18882 .48433	.21718 .49882	.24393 .51369	.26877 .53121	.29139 .55048
1.00	.00000 .41421	.03540 .41534	.07065 .41873	.10557 .42441	.13996 .43242	.17353 .44273	.20618 .45552	.23739 .47063	.26686 .48885	.29421 .50765	.31983 .52921

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 40$$

	A=0.00	A= .10	A= .20	A= .30	A= .40	A= .50	A= .60	A= .70	A= .80	A= .90	A=1.00
1/8											
.10	.00000 .92008	.00086 .92009	.00171 .92011	.00257 .92015	.00342 .92020	.00427 .92027	.00512 .92036	.00596 .92046	.00681 .92057	.00765 .92070	.00848 .92085
.20	.00000 .84276	.00326 .84282	.00651 .84299	.00975 .84327	.01297 .84366	.01617 .84415	.01933 .84477	.02245 .84548	.02553 .84639	.02853 .84721	.03152 .84822
.30	.00000 .77014	.00680 .77031	.01357 .77080	.02029 .77161	.02693 .77274	.03346 .77418	.03987 .77592	.04614 .77794	.05223 .78024	.05813 .78280	.06383 .78568
.40	.00000 .70354	.01097 .70386	.02188 .70482	.03267 .70641	.04329 .70861	.05367 .71141	.06376 .71478	.07351 .71869	.08288 .72311	.09182 .72799	.10038 .73329
.50	.00000 .64349	.01535 .64400	.03060 .64550	.04564 .64800	.06039 .65146	.07473 .65586	.08859 .66114	.10187 .66725	.11449 .67414	.12638 .68172	.13746 .68993
.60	.00000 .58996	.01962 .59065	.03911 .59272	.05831 .59614	.07709 .60089	.09531 .60692	.11283 .61418	.12952 .62259	.14527 .63207	.15995 .64258	.17347 .65377
.70	.00000 .54255	.02361 .54342	.04705 .54599	.07015 .55028	.09273 .55623	.11462 .56382	.13563 .57298	.15558 .58362	.17429 .59564	.19161 .60889	.20738 .62322
.80	.00000 .50068	.02722 .50169	.05426 .50471	.08093 .50974	.10701 .51676	.13231 .52574	.15660 .53663	.17963 .54934	.20118 .56377	.22101 .57973	.23891 .59784
.90	.00000 .46372	.03044 .46485	.06069 .46823	.09056 .47388	.11984 .48179	.14829 .49197	.17563 .50438	.20158 .51896	.22584 .53560	.24808 .55412	.26881 .57428
1.00	.00000 .43104	.03326 .43226	.06635 .43592	.09908 .44206	.13124 .45069	.16257 .46186	.19277 .47558	.22149 .49181	.24834 .51046	.27291 .53136	.29482 .55423

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 45$$

	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
1/8											
.10	.00000 .92410	.00075 .92411	.00150 .92413	.00225 .92417	.00300 .92422	.00375 .92429	.00449 .92437	.00524 .92446	.00598 .92457	.00671 .92470	.00744 .92484
.20	.00000 .85039	.00200 .85044	.00575 .85061	.00861 .85080	.01145 .85125	.01427 .85174	.01706 .85232	.01981 .85301	.02253 .85379	.02520 .85467	.02781 .85565
.30	.00000 .78067	.00605 .78083	.01207 .78131	.01805 .78211	.02395 .78321	.02975 .78462	.03546 .78632	.04102 .78830	.04642 .79054	.05165 .79384	.05669 .79576
.40	.00000 .71617	.00985 .71649	.01965 .71745	.02933 .71903	.03884 .72122	.04814 .72400	.05716 .72734	.06586 .73122	.07428 .73559	.08215 .74041	.08966 .74564
.50	.00000 .65750	.01391 .65801	.02772 .65953	.04133 .66205	.05465 .66555	.06759 .66998	.08005 .67530	.09196 .68144	.10323 .68834	.11381 .69592	.12365 .70411
.60	.00000 .60473	.01793 .60544	.03572 .60756	.05323 .61107	.07032 .61593	.08685 .62210	.10270 .62950	.11774 .63806	.13184 .64767	.14491 .65821	.15687 .66955
.70	.00000 .55763	.02173 .55852	.04329 .56120	.06450 .56565	.08519 .57132	.10517 .57967	.12427 .58912	.14231 .60007	.15912 .61239	.17454 .62592	.18845 .64048
.80	.00000 .51575	.02521 .51680	.05023 .51998	.07487 .52525	.09891 .53258	.12213 .54193	.14432 .55333	.16523 .56655	.18463 .58148	.20230 .59793	.21885 .61566
.90	.00000 .47856	.02834 .47975	.05648 .48333	.08423 .48930	.11134 .49766	.13753 .50834	.16269 .52144	.18635 .53673	.20825 .55411	.22889 .57335	.24559 .59418
1.00	.00000 .44551	.03111 .44681	.06203 .45072	.09257 .45725	.12249 .46643	.15153 .47830	.17937 .49284	.20565 .50999	.22998 .52963	.25193 .55152	.27115 .57532

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

K=SIN 50

1/8	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
.10	.80000 .92727	.00067 .92727	.00133 .92730	.00199 .92733	.00266 .92738	.00332 .92744	.00398 .92752	.00464 .92761	.00529 .92772	.00594 .92784	.00659 .92797
.20	.80000 .85643	.00256 .85648	.00511 .85664	.00765 .85690	.01018 .85727	.01269 .85773	.01516 .85830	.01761 .85897	.02002 .85973	.02239 .86058	.02472 .86152
.30	.80000 .78910	.00541 .78925	.01080 .78972	.01614 .79050	.02142 .79158	.02661 .79296	.03169 .79462	.03665 .79656	.04147 .79875	.04613 .80119	.05061 .80365
.40	.80000 .72540	.00887 .72672	.01769 .72766	.02640 .72923	.03496 .73140	.04330 .73416	.05140 .73747	.05919 .74130	.06666 .74561	.07375 .75037	.08045 .75552
.50	.80000 .66896	.01261 .66947	.02513 .67101	.03746 .67354	.04951 .67705	.06119 .68149	.07242 .68681	.08312 .69295	.09323 .69984	.10269 .70738	.11144 .71551
.60	.80000 .61695	.01637 .61767	.03260 .61983	.04855 .62340	.06410 .62833	.07911 .63459	.09345 .64208	.10700 .65072	.11966 .66039	.13134 .67097	.14195 .68231
.70	.80000 .57023	.01996 .57115	.03974 .57391	.05918 .57847	.07810 .58480	.09632 .59284	.11367 .60250	.12997 .61365	.14508 .62616	.15884 .63985	.17115 .65451
.80	.80000 .52845	.02328 .52955	.04636 .53284	.06905 .53830	.09114 .54591	.11241 .55561	.13264 .56731	.15159 .58089	.16904 .59617	.18480 .61293	.19869 .63090
.90	.80000 .49116	.02629 .49241	.05237 .49615	.07804 .50239	.10307 .51111	.12720 .52223	.15016 .53585	.17166 .55168	.19139 .56960	.20907 .58935	.22444 .61058
1.00	.80000 .45789	.02897 .45926	.05774 .46337	.08611 .47024	.11383 .47989	.14064 .49233	.16620 .50755	.19015 .52544	.21209 .54583	.23166 .56843	.24848 .59284

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

K=SIN 55

1/B	A=0.00	A= -10	A= .20	A= .30	A= .40	A= .50	A= .60	A= .70	A= .80	A= .90	A=1.00
.10	.00000 .92978	.00059 .92978	.00118 .92980	.00178 .92984	.00237 .92989	.00296 .92995	.00354 .93002	.00413 .93011	.00471 .93021	.00529 .93033	.00587 .93046
.20	.00000 .86124	.00229 .86130	.00457 .86145	.00684 .86170	.00909 .86206	.01133 .86251	.01354 .86306	.01573 .86371	.01788 .86445	.02000 .86528	.02287 .86619
.30	.00000 .79586	.00485 .79601	.00969 .79647	.01448 .79724	.01921 .79830	.02386 .79965	.02842 .80128	.03286 .80317	.03717 .80532	.04134 .80771	.04535 .81032
.40	.00000 .73468	.00800 .73500	.01595 .73593	.02380 .73749	.03151 .73964	.03902 .74237	.04630 .74564	.05330 .74942	.06000 .75368	.06635 .75837	.07234 .76345
.50	.00000 .67833	.01444 .67884	.02278 .68038	.03395 .68292	.04485 .68643	.05541 .69086	.06554 .69617	.07518 .70229	.08426 .70914	.09273 .71664	.10055 .72469
.60	.00000 .62703	.01492 .62776	.02971 .62994	.04423 .63355	.05836 .63853	.07197 .64483	.08495 .65237	.09718 .66105	.10856 .67074	.11981 .68132	.12947 .69263
.70	.00000 .58071	.01828 .58165	.03639 .58446	.05417 .58911	.07143 .59556	.08802 .60373	.10370 .61353	.11850 .62482	.13208 .63744	.14438 .65120	.15531 .66588
.80	.00000 .53908	.02142 .54021	.04264 .54360	.06348 .54922	.08372 .55703	.10314 .56696	.12154 .57892	.13870 .59275	.15440 .60827	.16846 .62522	.18072 .64330
.90	.00000 .50178	.02428 .50308	.04836 .50695	.07202 .51341	.09503 .52242	.11714 .53395	.13809 .54791	.15758 .56415	.17533 .58245	.19188 .60252	.20461 .62398
1.00	.00000 .46838	.02685 .46981	.05350 .47409	.07973 .48124	.10531 .49128	.12994 .50419	.15332 .51994	.17507 .53841	.19483 .55936	.21224 .58246	.22697 .60723

$$\frac{U/K+IV/K}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 60$$

	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
1/5											
.10	.00000 .93177	.00053 .93177	.00106 .93179	.00159 .93183	.00211 .93187	.00264 .93193	.00316 .93201	.00369 .93209	.00421 .93219	.00473 .93230	.00524 .93243
.20	.00800 .86504	.00205 .86513	.00409 .86528	.00612 .86553	.00814 .86587	.01014 .86632	.01212 .86696	.01408 .86749	.01600 .86821	.01790 .86902	.01975 .86991
.30	.00000 .80127	.00436 .80143	.00870 .80188	.01300 .80263	.01725 .80367	.02143 .80500	.02551 .80660	.02950 .80846	.03336 .81057	.03710 .81292	.04086 .81548
.40	.00000 .74136	.00721 .74167	.01438 .74260	.02146 .74414	.02840 .74627	.03516 .74897	.04171 .75221	.04800 .75595	.05402 .76016	.05972 .76479	.06506 .76973
.50	.00000 .68594	.01035 .68645	.02063 .68799	.03073 .69052	.04059 .69402	.05012 .69845	.05926 .70374	.06793 .70983	.07609 .71663	.08369 .72407	.09069 .73205
.60	.00000 .63527	.01357 .63601	.02701 .63820	.04020 .64183	.05301 .64684	.06534 .65315	.07707 .66074	.08809 .66943	.09833 .67911	.10769 .68966	.11613 .70031
.70	.00000 .58933	.01669 .59028	.03322 .59314	.04942 .59786	.06513 .60439	.08013 .61265	.09445 .62254	.10775 .63391	.11995 .64659	.13096 .66038	.14068 .67504
.80	.00000 .54789	.01982 .54905	.03906 .55251	.05811 .55824	.07659 .56620	.09427 .57631	.11097 .58846	.12647 .60247	.14057 .61814	.15312 .63519	.16399 .65331
.90	.00000 .51063	.02232 .51196	.04444 .51594	.06614 .52257	.08720 .53182	.10739 .54362	.12643 .55787	.14405 .57441	.16100 .59298	.17403 .61326	.18596 .63482
1.00	.00000 .47716	.02475 .47863	.04930 .48305	.07344 .49042	.09691 .50078	.11945 .51408	.14074 .53025	.16043 .54914	.17818 .57150	.19365 .59392	.20658 .61890

$$\frac{U/K+IV/K'}{U+IV=SN} \quad (A+IB)$$

$$K=\sin 65$$

1/8	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
.10	.00000 .93333	.00047 .93334	.00094 .93336	.00142 .93339	.00189 .93344	.00236 .93350	.00283 .93357	.00329 .93365	.00376 .93375	.00422 .93386	.00468 .93398
.20	.00000 .86812	.00183 .86815	.00366 .86830	.00547 .86854	.00728 .86888	.00907 .86932	.01084 .86985	.01259 .87047	.01431 .87117	.01600 .87197	.01766 .87284
.30	.00000 .80557	.00391 .80571	.00780 .80616	.01166 .80690	.01547 .80793	.01921 .80924	.02287 .81082	.02644 .81265	.02990 .81473	.03325 .81784	.03646 .81956
.40	.00000 .74668	.00649 .74698	.01293 .74791	.01930 .74943	.02553 .75155	.03161 .75422	.03749 .75743	.04314 .76113	.04853 .76530	.05363 .76988	.05844 .77482
.50	.00000 .69203	.00934 .69255	.01861 .69408	.02772 .69661	.03660 .70010	.04519 .70451	.05341 .70978	.06120 .71583	.06852 .72260	.07533 .72998	.08158 .73789
.60	.00000 .64191	.01228 .64265	.02445 .64486	.03638 .64850	.04796 .65353	.05903 .65987	.06965 .66744	.07956 .67613	.08874 .68580	.09712 .69638	.10465 .70749
.70	.00000 .59631	.01516 .59728	.03016 .60016	.04485 .60493	.05909 .61152	.07271 .61985	.08557 .62979	.09753 .64121	.10848 .65392	.11831 .66770	.12696 .68232
.80	.00000 .55506	.01788 .55624	.03557 .55975	.05290 .56557	.06967 .57365	.08570 .58369	.10078 .59617	.11473 .61030	.12737 .62606	.13856 .64316	.14819 .66127
.90	.00000 .51766	.02038 .51922	.04057 .52329	.06036 .53005	.07953 .53947	.09785 .55141	.11507 .56596	.13095 .58271	.14523 .60146	.15771 .62186	.16823 .64346
1.00	.00000 .43435	.02256 .48587	.04512 .49041	.06718 .49797	.08858 .50857	.10909 .52216	.12836 .53865	.14611 .55786	.16201 .57950	.17574 .60314	.18789 .62822

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 70$$

	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
1/8											
.10	.00000 .93454	.00042 .93455	.00084 .93457	.00126 .93460	.00168 .93465	.00210 .93470	.00251 .93477	.00293 .93486	.00334 .93495	.00375 .93506	.00416 .93518
.20	.00000 .87044	.00163 .87049	.00326 .87064	.00487 .87088	.00648 .87121	.00808 .87164	.00965 .87216	.01121 .87277	.01274 .87347	.01425 .87425	.01573 .87511
.30	.00000 .80890	.00349 .80904	.00696 .80949	.01040 .81022	.01380 .81123	.01714 .81253	.02040 .81409	.02358 .81590	.02667 .81795	.02965 .82023	.03251 .82272
.40	.00000 .75082	.00580 .75113	.01156 .75204	.01725 .75356	.02283 .75565	.02826 .75831	.03351 .76149	.03855 .76516	.04336 .76929	.04791 .77382	.05218 .77872
.50	.00000 .69680	.00838 .69731	.01668 .69884	.02484 .70136	.03280 .70485	.04048 .70924	.04783 .71449	.05479 .72051	.06133 .72724	.06739 .73458	.07296 .74243
.60	.00000 .64713	.01104 .64787	.02197 .65008	.03268 .65373	.04307 .65877	.05304 .66512	.06250 .67269	.07136 .68136	.07955 .69181	.08781 .70148	.09378 .71261
.70	.00000 .60183	.01365 .60280	.02717 .60570	.04039 .61050	.05319 .61713	.06541 .62550	.07694 .63549	.08764 .64693	.09748 .65964	.10614 .67341	.11380 .68798
.80	.00000 .56074	.01614 .56193	.03211 .56549	.04774 .57137	.06284 .57953	.07725 .58987	.09078 .60224	.10326 .61645	.11453 .63226	.12446 .64938	.13296 .66747
.90	.00000 .52361	.01844 .52499	.03670 .52912	.05458 .53599	.07188 .54555	.08837 .55771	.10383 .57235	.11804 .58924	.13076 .60811	.14182 .62858	.15187 .65019
1.00	.00000 .49010	.02054 .49163	.04090 .49627	.06086 .50398	.08020 .51477	.09868 .52858	.11601 .54531	.13190 .56476	.14684 .58659	.15818 .61035	.16813 .63547

$$\frac{U/K+I/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 75$$

1/B	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.98	A=1.00
.10	.00000 .93544	.00037 .93545	.00074 .93547	.00111 .93550	.00148 .93554	.00185 .93560	.00221 .93567	.00258 .93575	.00294 .93585	.00331 .93595	.00367 .93607
.20	.00000 .87219	.00144 .87223	.00287 .87238	.00430 .87261	.00571 .87295	.00712 .87337	.00851 .87388	.00988 .87449	.01123 .87518	.01256 .87595	.01386 .87688
.30	.00000 .81138	.00308 .81153	.00614 .81197	.00918 .81269	.01217 .81370	.01512 .81498	.01800 .81652	.02081 .81832	.02353 .82035	.02615 .82261	.02868 .82587
.40	.00000 .75392	.00513 .75423	.01022 .75514	.01525 .75664	.02017 .75873	.02497 .76136	.02960 .76453	.03405 .76817	.03830 .77227	.04231 .77677	.04688 .78163
.50	.00000 .70038	.00742 .70089	.01477 .70242	.02195 .70493	.02903 .70841	.03583 .71279	.04232 .71802	.04847 .72402	.05424 .73071	.05959 .73881	.06449 .74582
.60	.00000 .65106	.00979 .65150	.01948 .65402	.02898 .65767	.03819 .66271	.04702 .66906	.05539 .67663	.06322 .68529	.07044 .69491	.07782 .70534	.08298 .71642
.70	.00000 .60599	.01214 .60697	.02414 .60989	.03588 .61471	.04724 .62136	.05808 .62976	.06828 .63977	.07773 .65123	.08635 .66394	.09404 .67768	.10076 .69221
.80	.00000 .56505	.01437 .56625	.02858 .56983	.04248 .57577	.05590 .58398	.06869 .59438	.08067 .60681	.09170 .62108	.10163 .63692	.11036 .65484	.11781 .67289
.90	.00000 .52798	.01645 .52938	.03272 .53356	.04864 .54050	.06403 .55016	.07868 .56243	.09239 .57718	.10494 .59418	.11615 .61312	.12585 .63362	.13393 .65521
1.00	.00000 .49448	.01834 .49605	.03651 .50074	.05431 .50856	.07155 .51948	.08797 .53346	.10374 .55036	.11739 .56997	.12984 .59193	.14048 .61577	.14913 .64089

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 80$$

1/B	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.50	A=.70	A=.60	A=.90	A=1.00
.10	.00000 .93606	.00032 .93607	.00064 .93609	.00096 .93612	.00127 .93616	.00159 .93622	.00191 .93629	.00222 .93637	.00253 .93646	.00285 .93657	.00316 .93669
.20	.00000 .87339	.00124 .87344	.00247 .87358	.00370 .87362	.00492 .87415	.00613 .87457	.00733 .87508	.00851 .87567	.00968 .87636	.01082 .87712	.01194 .87797
.30	.00000 .81311	.00265 .81325	.00530 .81369	.00795 .81411	.01050 .81541	.01304 .81663	.01552 .81821	.01794 .82088	.02029 .82282	.02255 .82426	.02473 .82670
.40	.00000 .75607	.00443 .75638	.00882 .75729	.01326 .75808	.01741 .76086	.02155 .76349	.02555 .76663	.02939 .77026	.03385 .77434	.03651 .77882	.03976 .78365
.50	.00000 .70288	.00641 .70339	.01277 .70491	.01911 .70742	.02509 .71038	.03096 .71525	.03657 .72047	.04188 .72645	.04685 .73312	.05146 .74039	.05568 .74816
.60	.00000 .65380	.00847 .65454	.01686 .65676	.02518 .66042	.03304 .66546	.04068 .67181	.04790 .67937	.05486 .68802	.06189 .69762	.06656 .70883	.07162 .71987
.70	.00000 .60891	.01052 .60989	.02092 .61281	.03119 .62045	.04092 .62432	.05023 .63273	.05911 .64276	.06727 .65422	.07478 .66692	.08132 .68065	.08718 .69514
.80	.00000 .56807	.01247 .56927	.02480 .57288	.03415 .57814	.04848 .58710	.05954 .59754	.06990 .61081	.07943 .62430	.08799 .64016	.09549 .65728	.10189 .67530
.90	.00000 .53105	.01429 .53246	.02842 .53667	.04214 .54367	.05558 .55339	.06827 .56574	.08013 .58056	.09097 .59782	.10062 .61661	.10892 .63712	.11587 .65869
1.00	.00000 .49756	.01595 .49914	.03174 .50388	.04721 .51177	.06217 .52279	.07641 .53688	.08970 .55390	.10182 .57361	.11255 .59566	.12167 .61954	.12986 .64465

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 85$$

1/B	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
.10	.00000 .93643	.00026 .93643	.00052 .93645	.00078 .93648	.00104 .93653	.00129 .93658	.00155 .93665	.00181 .93673	.00206 .93683	.00232 .93693	.00257 .93705
.20	.00000 .87410	.00101 .87415	.00201 .87429	.00301 .87452	.00401 .87485	.00499 .87527	.00597 .87578	.00693 .87637	.00788 .87705	.00881 .87781	.00972 .87865
.30	.00000 .81412	.00216 .81426	.00431 .81470	.00644 .81541	.00855 .81641	.01062 .81768	.01264 .81921	.01461 .82098	.01652 .82388	.01836 .82523	.02013 .82766
.40	.00000 .75734	.00361 .75765	.00719 .75855	.01073 .76005	.01419 .76212	.01756 .76473	.02082 .76787	.02395 .77145	.02692 .77556	.02974 .78002	.03239 .78483
.50	.00000 .70435	.00523 .70486	.01041 .70638	.01550 .70888	.02046 .71234	.02524 .71671	.02981 .72191	.03413 .72789	.03818 .73454	.04194 .74188	.04537 .74954
.60	.00000 .65542	.00692 .65616	.01376 .65838	.02047 .66204	.02696 .66708	.03313 .67343	.03908 .68098	.04458 .68963	.04966 .69922	.05427 .70961	.05838 .72063
.70	.00000 .61063	.00859 .61161	.01708 .61454	.02539 .61939	.03341 .62607	.04106 .63449	.04824 .64452	.05490 .65598	.06094 .66868	.06633 .68239	.07192 .69686
.80	.00000 .56985	.01019 .57106	.02026 .57458	.03011 .58066	.03960 .58894	.04864 .59941	.05709 .61190	.06484 .62621	.07181 .64298	.07791 .65919	.08399 .67719
.90	.00000 .53287	.01158 .53429	.02324 .53852	.03454 .54554	.04544 .55530	.05580 .56763	.06547 .58255	.07430 .59965	.08215 .61867	.08992 .63919	.09452 .66074
1.00	.00000 .49939	.01305 .50098	.02597 .50575	.03862 .51368	.05085 .52476	.06249 .53891	.07333 .55599	.08320 .57577	.09192 .59785	.09933 .62176	.10531 .64685

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+18)$$

K=SIN 86

1/8	A= 0.00	A= .10	A= .20	A= .30	A= .40	A= .50	A= .60	A= .70	A= .80	A= .90	A= 1.00
.10	.00200 .93647	.00024 .93648	.00049 .93650	.00073 .93653	.00098 .93657	.00122 .93663	.00146 .93670	.00171 .93678	.00195 .93687	.00219 .93697	.00243 .93709
.20	.00000 .87418	.00095 .87423	.00190 .87437	.00284 .87461	.00378 .87493	.00471 .87535	.00563 .87586	.00654 .87645	.00744 .87713	.00832 .87790	.00918 .87874
.30	.00000 .81424	.00204 .81438	.00407 .81482	.00609 .81553	.00807 .81653	.01003 .81780	.01193 .81932	.01379 .82110	.01560 .82311	.01734 .82534	.01901 .82778
.40	.00000 .75749	.00341 .75780	.00679 .75870	.01013 .76020	.01340 .76227	.01658 .76488	.01966 .76802	.02261 .77164	.02542 .77570	.02809 .78016	.03058 .78497
.50	.00000 .70452	.00494 .70503	.00983 .70655	.01464 .70806	.01932 .71252	.02384 .71688	.02815 .72209	.03224 .72806	.03606 .73471	.03960 .74196	.04285 .74971
.60	.00000 .65362	.00553 .65436	.01300 .65857	.01933 .66223	.02546 .66727	.03134 .67362	.03691 .68118	.04211 .68982	.04698 .69941	.05125 .70988	.05514 .72081
.70	.00000 .61083	.00811 .61182	.01614 .61475	.02398 .61959	.03156 .62628	.03873 .63470	.04557 .64473	.05185 .65619	.05756 .66889	.06284 .68264	.06787 .69787
.80	.00000 .57007	.00963 .57128	.01914 .57490	.02844 .58088	.03741 .58916	.04594 .59963	.05392 .61212	.06125 .62644	.06783 .64230	.07358 .65941	.07848 .67741
.90	.00000 .53309	.01104 .53450	.02195 .53874	.03263 .54577	.04292 .55553	.05271 .56793	.06184 .58279	.07018 .59990	.07760 .61891	.08399 .63943	.08928 .66098
1.00	.00000 .49961	.01233 .50121	.02454 .50597	.03649 .51391	.04804 .52499	.05902 .53915	.06927 .55624	.07868 .57682	.08683 .59812	.09382 .62202	.09946 .64712

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin \theta$$

1/R	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
.10	.00000 .93651	.00023 .93651	.00046 .93653	.00068 .93656	.00091 .93661	.00114 .93665	.00137 .93673	.00159 .93681	.00182 .93690	.00204 .93701	.00226 .93712
.20	.00000 .87425	.00089 .87430	.00177 .87444	.00265 .87467	.00353 .87500	.00440 .87542	.00526 .87592	.00610 .87652	.00694 .87720	.00776 .87796	.00856 .87880
.30	.00000 .81433	.00190 .81448	.00380 .81491	.00569 .81563	.00753 .81662	.00935 .81709	.01114 .81942	.01287 .82119	.01456 .82320	.01618 .82543	.01774 .82767
.40	.00000 .75761	.00318 .75791	.00634 .75892	.00945 .76031	.01251 .76238	.01544 .76500	.01835 .76813	.02110 .77175	.02373 .77581	.02621 .78027	.02854 .78503
.50	.00000 .70466	.00461 .70517	.00918 .70669	.01366 .70919	.01803 .71265	.02225 .71702	.02627 .72222	.03009 .72819	.03365 .73484	.03696 .74209	.03993 .74984
.60	.00000 .65577	.00610 .65651	.01213 .65872	.01804 .66238	.02377 .66742	.02925 .67377	.03445 .68133	.03930 .68997	.04377 .69958	.04783 .70994	.05146 .72096
.70	.00000 .61099	.00757 .61198	.01506 .61491	.02238 .61975	.02945 .62644	.03620 .63486	.04253 .64489	.04839 .65636	.05372 .66906	.05847 .68275	.06260 .69723
.80	.00000 .57023	.00899 .57144	.01787 .57505	.02655 .58105	.03492 .58933	.04283 .59980	.05033 .61230	.05717 .62661	.06331 .64248	.06868 .65959	.07324 .67758
.90	.00000 .53326	.01030 .53467	.02050 .53891	.03046 .54594	.04007 .55571	.04920 .56811	.05773 .58238	.06551 .60008	.07243 .61910	.07839 .63962	.08333 .66117
1.00	.00000 .49978	.01151 .50137	.02291 .50614	.03407 .51409	.04465 .52518	.05510 .53934	.06467 .55644	.07337 .57622	.08105 .59832	.08757 .62223	.09283 .64732

$$\frac{U/K + IV/K'}{-1}$$

$$U + IV = \sin (A + i9)$$

$$K = \sin \theta \theta$$

	A = 0.00	A = .10	A = .20	A = .30	A = .40	A = .50	A = .60	A = .70	A = .80	A = .90	A = 1.00
1/8											
.10	.00000 .93653	.00021 .93654	.00042 .93655	.00063 .93659	.00083 .93663	.00104 .93667	.00125 .93675	.00146 .93683	.00160 .93693	.00187 .93703	.00207 .93715
.20	.00000 .87430	.00081 .87434	.00162 .87448	.00243 .87472	.00323 .87505	.00402 .87540	.00481 .87577	.00558 .87657	.00634 .87724	.00709 .87801	.00783 .87884
.30	.00000 .81440	.00174 .81454	.00347 .81498	.00519 .81569	.00689 .81669	.00855 .81796	.01018 .81948	.01177 .82126	.01331 .82322	.01479 .82550	.01622 .82793
.40	.00000 .75770	.00291 .75800	.00579 .75890	.00864 .76040	.01143 .76246	.01413 .76508	.01677 .76822	.01929 .77183	.02169 .77589	.02396 .78035	.02609 .78516
.50	.00000 .70476	.00421 .70526	.00839 .70648	.01249 .70829	.01649 .71125	.02034 .71711	.02402 .72231	.02750 .72828	.03077 .73494	.03379 .74218	.03656 .74993
.60	.00000 .65587	.00557 .65662	.01109 .65883	.01649 .66249	.02173 .66753	.02675 .67388	.03149 .68143	.03593 .69007	.04002 .69966	.04373 .71005	.04704 .72106
.70	.00000 .61111	.00692 .61209	.01377 .61502	.02047 .61987	.02693 .62555	.03307 .63497	.03889 .64501	.04425 .65647	.04911 .66917	.05345 .68288	.05723 .69734
.80	.00000 .57035	.00822 .57156	.01634 .57518	.02428 .58117	.03193 .58945	.03921 .59992	.04602 .61242	.05227 .62674	.05788 .64261	.06279 .65971	.06696 .67771
.90	.00000 .53338	.00942 .53479	.01874 .53903	.02785 .54607	.03654 .55583	.04493 .56822	.05278 .58311	.05990 .60022	.06622 .61924	.07167 .63976	.07618 .66131
1.00	.00000 .49990	.01053 .50149	.02095 .50627	.03115 .51421	.04101 .52531	.05033 .53948	.05913 .55658	.06709 .57637	.07411 .59847	.08007 .62237	.08489 .64747

$$\frac{U/K+IV/K'}{J+IV=SN} \quad A+(B)$$

$$K=\sin \theta$$

1/0	A=0.00	A=.10	A=.20	A=.30	A=.40	A=.50	A=.60	A=.70	A=.80	A=.90	A=1.00
.10	.00000 .93654	.00010 .93655	.00036 .93657	.00055 .93660	.00073 .93664	.00091 .93670	.00109 .93677	.00127 .93685	.00145 .93694	.00163 .93705	.00180 .93716
.20	.00000 .87432	.00071 .87437	.00141 .87451	.00212 .87475	.00281 .87507	.00351 .87543	.00419 .87600	.0047 .87659	.00553 .87727	.00619 .87803	.00683 .87887
.30	.00000 .81444	.00152 .81458	.00303 .81502	.00453 .81573	.00601 .81673	.00745 .81801	.00888 .81952	.01026 .82130	.01161 .82331	.01290 .82553	.01415 .82797
.40	.00000 .75775	.00254 .75805	.00505 .75895	.00754 .76045	.00997 .76281	.01234 .76513	.01463 .76826	.01683 .77188	.01892 .77594	.02090 .78040	.02276 .78521
.50	.00000 .70481	.00367 .70532	.00732 .70684	.01090 .70935	.01438 .71281	.01774 .71717	.02095 .72237	.02399 .72834	.02684 .73499	.02947 .74224	.03189 .74998
.60	.00000 .65594	.00486 .65669	.00968 .65890	.01435 .66255	.01896 .66759	.02333 .67394	.02747 .68150	.03134 .69014	.03491 .69973	.03814 .71011	.04104 .72112
.70	.00000 .61118	.00604 .61216	.01201 .61509	.01785 .61994	.02349 .62662	.02887 .63505	.03342 .64508	.03850 .65654	.04284 .66924	.04663 .68295	.04992 .69741
.80	.00000 .57042	.00717 .57163	.01425 .57525	.02118 .58124	.02746 .58953	.03421 .60000	.04015 .61250	.04560 .62681	.05049 .64268	.05478 .65979	.05841 .67778
.90	.00000 .53345	.00822 .53487	.01635 .53911	.02430 .54514	.03197 .55591	.03925 .56831	.04605 .58319	.05225 .60030	.05777 .61932	.06252 .63984	.06646 .66139
1.00	.00000 .49990	.00919 .50157	.01828 .50634	.02718 .51429	.03578 .52538	.04395 .53955	.05159 .55566	.05853 .57645	.06465 .59855	.06985 .62246	.07404 .64755

$$\frac{U}{K+IV/K'} \\ -1 \\ U+IV=SH \quad (A+IB)$$

$$K=\sin 5$$

6	1/A= .01	1/A= .02	1/A= .03	1/A= .04	1/A= .05	1/A= .06	1/A= .07	1/A= .08	1/A= .09	1/A= .10
0.00	.07307 1.00000	.14713 1.00000	.22332 1.00000	.30305 1.00000	.38840 1.00000	.48279 1.00000	.59312 1.00000	.73979 1.00000	1.00000 .93325	1.00000 .85941
.10	.07307 .99997	.14713 .99988	.22331 .99971	.30305 .99946	.38839 .99908	.48276 .99851	.59304 .99753	.73944 .99516	.97718 .93266	.98698 .85935
.20	.07307 .99994	.14713 .99975	.22331 .99943	.30303 .99892	.38835 .99817	.48266 .99702	.59200 .99507	.73841 .99036	.95543 .93106	.97400 .85918
.30	.07307 .99991	.14713 .99963	.22330 .99914	.30300 .99836	.38828 .99726	.48250 .99554	.59240 .99261	.73674 .98564	.92532 .92875	.96109 .85890
.40	.07307 .99988	.14712 .99951	.22328 .99885	.30296 .99784	.38818 .99634	.48228 .99405	.59184 .99016	.73446 .98102	.91695 .92605	.94429 .85852
.50	.07307 .99985	.14712 .99938	.22326 .99856	.30290 .99730	.38806 .99543	.48200 .99257	.59113 .98773	.73165 .97654	.90012 .92318	.93562 .85803
.60	.07306 .99982	.14711 .99926	.22324 .99820	.30284 .99676	.38790 .99452	.48165 .99109	.59026 .98531	.72837 .97220	.88462 .92025	.92311 .85747
.70	.07306 .99979	.14710 .99914	.22321 .99799	.30276 .99623	.38773 .99361	.48125 .98962	.58925 .98291	.72468 .96802	.87023 .91734	.91078 .85682
.80	.07306 .99976	.14709 .99902	.22317 .99770	.30267 .99569	.38752 .99270	.48078 .98816	.58809 .98054	.72064 .96400	.85676 .91449	.89865 .85611
.90	.07306 .99973	.14708 .99889	.22313 .99742	.30257 .99515	.38728 .99179	.48025 .98669	.58679 .97819	.71632 .96015	.84406 .91172	.88672 .85534
1.00	.07306 .99970	.14707 .99877	.22309 .99713	.30246 .99461	.38702 .99049	.47967 .98524	.58536 .97586	.71177 .95646	.83201 .90905	.87501 .85452

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 10$$

B	1/A= .01	1/A= .02	1/A= .03	1/A= .04	1/A= .05	1/A= .06	1/A= .07	1/A= .08	1/A= .09	1/A= .10
0.00	.03640 1.00000	.07293 1.00000	.10971 1.00000	.14689 1.00000	.18460 1.00000	.22303 1.00000	.26235 1.00000	.30282 1.00000	.34471 1.00000	.38839 1.00000
.10	.03640 .99998	.07293 .99993	.10971 .99983	.14689 .99970	.18460 .99952	.22302 .99930	.26234 .99902	.30279 .99868	.34467 .99826	.38833 .99773
.20	.03640 .99996	.07293 .99985	.10971 .99967	.14688 .99940	.18458 .99905	.22299 .99860	.26229 .99804	.30272 .99736	.34456 .99653	.38816 .99551
.30	.03640 .99995	.07293 .99978	.10971 .99950	.14687 .99910	.18456 .99857	.22295 .99790	.26222 .99706	.30260 .99604	.34438 .99480	.38789 .99328
.40	.03640 .99993	.07293 .99971	.10970 .99933	.14685 .99880	.18452 .99809	.22289 .99719	.26211 .99608	.30244 .99472	.34412 .99307	.38751 .99104
.50	.03640 .99991	.07292 .99963	.10969 .99917	.14683 .99850	.18448 .99761	.22280 .99649	.26198 .99511	.30222 .99341	.34379 .99134	.38699 .98882
.60	.03640 .99989	.07292 .99956	.10968 .99900	.14680 .99820	.18442 .99714	.22270 .99580	.26181 .99413	.30196 .99210	.34338 .98963	.38639 .98661
.70	.03640 .99987	.07292 .99949	.10966 .99883	.14677 .99790	.18436 .99666	.22259 .99510	.26162 .99316	.30165 .99079	.34291 .98791	.38567 .98442
.80	.03640 .99985	.07291 .99941	.10965 .99867	.14673 .99760	.18428 .99619	.22245 .99440	.26140 .99219	.30129 .98949	.34236 .98621	.38485 .98223
.90	.03640 .99984	.07291 .99934	.10963 .99850	.14669 .99730	.18420 .99571	.22230 .99370	.26114 .99122	.30089 .98819	.34175 .98452	.38392 .98007
1.00	.03640 .99982	.07290 .99926	.10961 .99833	.14664 .99700	.18411 .99524	.22213 .99301	.26086 .99026	.30045 .98690	.34106 .98284	.38290 .97793

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 15$$

B	1/A= .01	1/A= .02	1/A= .03	1/A= .04	1/A= .05	1/A= .06	1/A= .07	1/A= .08	1/A= .09	1/A= .10
0.00	.02410 1.00000	.04840 1.00000	.07270 1.00000	.09712 1.00000	.12170 1.00000	.14648 1.00000	.17151 1.00000	.19684 1.00000	.22253 1.00000	.24865 1.00000
.10	.02418 .99999	.04840 .99994	.07270 .99987	.09712 .99977	.12169 .99964	.14647 .99948	.17150 .99929	.19683 .99906	.22251 .99879	.24862 .99848
.20	.02416 .99997	.04840 .99989	.07270 .99975	.09711 .99955	.12168 .99929	.14645 .99897	.17147 .99858	.19679 .99812	.22245 .99758	.24853 .99696
.30	.02418 .99996	.04840 .99983	.07270 .99962	.09711 .99932	.12167 .99893	.14643 .99845	.17143 .99786	.19672 .99717	.22235 .99637	.24839 .99544
.40	.02418 .99994	.04840 .99978	.07269 .99949	.09705 .99910	.12165 .99858	.14639 .99783	.17137 .99715	.19662 .99624	.22221 .99516	.24819 .99393
.50	.02418 .99993	.04840 .99972	.07269 .99937	.09708 .99887	.12162 .99822	.14634 .99742	.17128 .99644	.19650 .99530	.22203 .99396	.24793 .99242
.60	.02418 .99992	.04840 .99966	.07268 .99924	.09706 .99864	.12158 .99787	.14628 .99690	.17119 .99574	.19635 .99436	.22181 .99276	.24761 .99091
.70	.02418 .99990	.04839 .99961	.07267 .99911	.09704 .99842	.12154 .99751	.14621 .99638	.17107 .99505	.19617 .99343	.22155 .99156	.24724 .98942
.80	.02418 .99989	.04839 .99955	.07266 .99899	.09702 .99819	.12150 .99716	.14612 .99587	.17094 .99432	.19596 .99250	.22125 .99037	.24682 .98793
.90	.02418 .99987	.04839 .99950	.07265 .99886	.09699 .99737	.12144 .99680	.14603 .99536	.17078 .99362	.19573 .99157	.22091 .98919	.24634 .98645
1.00	.02418 .99986	.04838 .99944	.07264 .99874	.09696 .99774	.12138 .99645	.14593 .99484	.17061 .99292	.19547 .99064	.22053 .98801	.24580 .98498

$$\frac{U/K+IV/K}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 20$$

B	1/A= .01	1/A= .02	1/A= .03	1/A= .04	1/A= .05	1/A= .06	1/A= .07	1/A= .08	1/A= .09	1/A= .10
0.00	.01805 1.00000	.03612 1.00000	.05422 1.00000	.07238 1.00000	.09060 1.00000	.10892 1.00000	.12734 1.00000	.14589 1.00000	.16459 1.00000	.18346 1.00000
.10	.01805 .99999	.03612 .99995	.05422 .99989	.07238 .99981	.09060 .99970	.10891 .99957	.12733 .99941	.14588 .99923	.16458 .99902	.18344 .99877
.20	.01805 .99998	.03612 .99991	.05422 .99979	.07237 .99962	.09059 .99941	.10890 .99914	.12731 .99883	.14585 .99846	.16453 .99803	.18339 .99755
.30	.01805 .99996	.03612 .99986	.05422 .99968	.07237 .99944	.09058 .99911	.10889 .99872	.12728 .99824	.14580 .99769	.16446 .99705	.18329 .99632
.40	.01805 .99995	.03612 .99981	.05421 .99958	.07236 .99925	.09056 .99882	.10885 .99829	.12724 .99766	.14573 .99692	.16436 .99617	.18315 .99510
.50	.01805 .99994	.03612 .99977	.05421 .99947	.07235 .99906	.09054 .99852	.10882 .99786	.12718 .99707	.14564 .99615	.16424 .99509	.18297 .99388
.60	.01805 .99993	.03611 .99972	.05420 .99937	.07233 .99887	.09052 .99823	.10877 .99744	.12711 .99649	.14554 .99539	.16408 .99411	.18275 .99267
.70	.01805 .99992	.03611 .99967	.05420 .99926	.07232 .99868	.09049 .99793	.10872 .99701	.12702 .99591	.14541 .99462	.16390 .99314	.18249 .99146
.80	.01805 .99991	.03611 .99963	.05419 .99916	.07230 .99850	.09045 .99754	.10866 .99659	.12692 .99533	.14526 .99386	.16368 .99217	.18220 .99026
.90	.01805 .99989	.03611 .99958	.05419 .99905	.07228 .99831	.09042 .99735	.10859 .99615	.12682 .99475	.14510 .99310	.16344 .99121	.18186 .98906
1.00	.01805 .99988	.03610 .99953	.05417 .99895	.07226 .99812	.09037 .99705	.10851 .99574	.12669 .99417	.14491 .99234	.16318 .99025	.18149 .98787

$$\frac{U/K+IV/K}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 25$$

B	1/A= .01	1/A= .02	1/A= .03	1/A= .04	1/A= .05	1/A= .06	1/A= .07	1/A= .08	1/A= .09	1/A= .10
0.00	.01435 1.00000	.02871 1.00000	.04309 1.00000	.05750 1.00000	.07195 1.00000	.08644 1.00000	.10099 1.00000	.11562 1.00000	.13032 1.00000	.14511 1.00000
.10	.01435 .99999	.02871 .99996	.04309 .99991	.05750 .99984	.07194 .99974	.08644 .99963	.10099 .99949	.11561 .99933	.13031 .99915	.14510 .99894
.20	.01435 .99996	.02871 .99992	.04309 .99981	.05750 .99967	.07194 .99948	.08643 .99925	.10097 .99898	.11559 .99866	.13027 .99829	.14505 .99788
.30	.01435 .99997	.02871 .99988	.04309 .99972	.05749 .99951	.07193 .99923	.08641 .99888	.10095 .99847	.11555 .99799	.13022 .99744	.14497 .99682
.40	.01435 .99996	.02871 .99984	.04308 .99963	.05748 .99934	.07192 .99897	.08639 .99851	.10091 .99796	.11549 .99732	.13014 .99659	.14487 .99577
.50	.01435 .99995	.02871 .99979	.04308 .99954	.05748 .99918	.07190 .99871	.08636 .99813	.10087 .99745	.11542 .99665	.13004 .99574	.14473 .99471
.60	.01435 .99994	.02871 .99975	.04308 .99945	.05747 .99901	.07188 .99845	.08633 .99776	.10081 .99694	.11534 .99599	.12992 .99490	.14456 .99386
.70	.01435 .99993	.02871 .99971	.04307 .99935	.05745 .99885	.07186 .99819	.08628 .99739	.10074 .99644	.11524 .99532	.12978 .99405	.14436 .99262
.80	.01435 .99992	.02870 .99967	.04307 .99926	.05744 .99868	.07183 .99794	.08624 .99702	.10067 .99593	.11513 .99466	.12962 .99321	.14414 .99158
.90	.01435 .99991	.02870 .99963	.04306 .99917	.05742 .99852	.07180 .99768	.08618 .99664	.10058 .99542	.11500 .99400	.12943 .99238	.14388 .99054
1.00	.01435 .99990	.02870 .99959	.04305 .99908	.05741 .99835	.07176 .99742	.08612 .99629	.10049 .99492	.11485 .99334	.12922 .99154	.14359 .98951

U/K+IV/K'
-1
U+IV=SN (A<IB)

K=SIN 30

B	1/A=	.01	.02	.03	.04	.05	.06	.07	.08	.09	.10
0.00	.01187 1.00000	.02374 1.00000	.03562 1.00000	.04752 1.00000	.05944 1.00000	.07140 1.00000	.08339 1.00000	.09543 1.00000	.10751 1.00000	.11965 1.00000	
.10	.01187 .99999	.02374 .99996	.03562 .99992	.04752 .99985	.05944 .99977	.07140 .99966	.08339 .99954	.09542 .99940	.10750 .99923	.11964 .99905	
.20	.01187 .99998	.02374 .99993	.03562 .99983	.04752 .99970	.05944 .99953	.07139 .99933	.08337 .99908	.09540 .99879	.10747 .99847	.11960 .99810	
.30	.01187 .99997	.02374 .99989	.03562 .99975	.04751 .99955	.05943 .99930	.07138 .99899	.08335 .99862	.09537 .99819	.10743 .99770	.11954 .99715	
.40	.01186 .99996	.02373 .99985	.03561 .99967	.04751 .99940	.05942 .99907	.07136 .99865	.08332 .99816	.09532 .99759	.10736 .99694	.11945 .99620	
.50	.01186 .99995	.02373 .99981	.03561 .99958	.04750 .99926	.05941 .99883	.07133 .99832	.08329 .99770	.09527 .99699	.10728 .99617	.11934 .99526	
.60	.01186 .99994	.02373 .99978	.03561 .99950	.04749 .99911	.05939 .99860	.07131 .99798	.08324 .99724	.09520 .99639	.10719 .99541	.11920 .99431	
.70	.01186 .99994	.02373 .99974	.03560 .99941	.04748 .99896	.05937 .99837	.07127 .99765	.08319 .99679	.09512 .99579	.10707 .99465	.11904 .99338	
.80	.01186 .99993	.02373 .99970	.03560 .99933	.04747 .99881	.05935 .99814	.07123 .99741	.08313 .99633	.09503 .99519	.10694 .99390	.11885 .99244	
.90	.01186 .99992	.02373 .99967	.03559 .99925	.04746 .99866	.05932 .99790	.07119 .99698	.08305 .99580	.09492 .99460	.10678 .99315	.11865 .99151	
1.00	.01186 .99991	.02373 .99963	.03559 .99916	.04744 .99851	.05930 .99767	.07114 .99664	.08298 .99542	.09480 .99401	.10662 .99240	.11841 .99059	

U/K+TV/K'
-1
U+IV=SN (A'-B)

K=SIN 35

B	1/A= .01	1/A= .02	1/A= .03	1/A= .04	1/A= .05	1/A= .06	1/A= .0	1/A= .09	1/A= .10
0.00	.01007 1.00000	.02015 1.00000	.03023 1.00000	.04033 1.00000	.05044 1.00000	.06057 1.00000	.07073 1.00000	.08091 1.00000	.10139 1.00000
.10	.01007 .99999	.02015 .99997	.03023 .99992	.04032 .99986	.05044 .99978	.06057 .99969	.07072 .99958	.08091 .99944	.10138 .99913
.20	.01007 .99998	.02015 .99993	.03023 .99985	.04032 .99972	.05043 .99957	.06056 .99938	.07071 .99915	.08089 .99889	.10135 .99825
.30	.01007 .99997	.02015 .99990	.03023 .99977	.04032 .99959	.05043 .99935	.06055 .99907	.07070 .99873	.08087 .99833	.10130 .99773
.40	.01007 .99997	.02015 .99986	.03023 .99959	.04032 .99945	.05042 .99914	.06053 .99876	.07067 .99831	.08083 .99777	.10122 .99651
.50	.01007 .99996	.02014 .99983	.03022 .99961	.04031 .99931	.05041 .99892	.06051 .99845	.07064 .99788	.08078 .99723	.10113 .99554
.60	.01007 .99995	.02014 .99979	.03022 .99954	.04030 .99915	.05039 .99871	.06049 .99814	.07060 .99745	.08072 .99667	.10102 .99477
.70	.01007 .99994	.02014 .99976	.03022 .99946	.04029 .99904	.05038 .99849	.06046 .99783	.07056 .99714	.08066 .99508	.10088 .99391
.80	.01007 .99993	.02014 .99973	.03021 .99938	.04028 .99890	.05036 .99828	.06043 .99752	.07050 .99662	.08065 .99439	.10073 .99305
.90	.01007 .99992	.02014 .99969	.03021 .99931	.04027 .99876	.05033 .99807	.06039 .99721	.07044 .99620	.08052 .99365	.10055 .99220
1.00	.01007 .99991	.02014 .99966	.03020 .99923	.04026 .99863	.05031 .99785	.06035 .99690	.07038 .99578	.08038 .99300	.10035 .99135

$$\frac{U/K+IV/K}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 40$$

B	1/A= .01	1/A= .02	1/A= .03	1/A= .04	1/A= .05	1/A= .06	1/A= .07	1/A= .08	1/A= .09	1/A= .10
0.00	.00871 1.00000	.01742 1.00000	.02613 1.00000	.03486 1.00000	.04360 1.00000	.05235 1.00000	.06112 1.00000	.06991 1.00000	.07873 1.00000	.08757 1.00000
.10	.00871 .99999	.01742 .99997	.02613 .99993	.03486 .99987	.04360 .99980	.05235 .99971	.06112 .99962	.06991 .99948	.07873 .99934	.08757 .99918
.20	.00871 .99998	.01742 .99994	.02613 .99986	.03486 .99974	.04360 .99960	.05235 .99942	.06112 .99921	.06991 .99896	.07873 .99868	.08757 .99837
.30	.00871 .99998	.01742 .99990	.02613 .99978	.03486 .99961	.04360 .99939	.05235 .99913	.06112 .99881	.06991 .99844	.07873 .99802	.08757 .99755
.40	.00871 .99997	.01742 .99987	.02613 .99971	.03486 .99948	.04360 .99919	.05235 .99884	.06112 .99841	.06991 .99792	.07873 .99736	.08757 .99673
.50	.00871 .99996	.01742 .99984	.02613 .99964	.03486 .99936	.04360 .99899	.05235 .99857	.06112 .99802	.06991 .99740	.07873 .99671	.08757 .99592
.60	.00871 .99995	.01742 .99981	.02613 .99957	.03486 .99923	.04360 .99879	.05235 .99826	.06112 .99762	.06991 .99689	.07873 .99605	.08757 .99511
.70	.00871 .99994	.01742 .99977	.02613 .99949	.03486 .99910	.04360 .99859	.05235 .99797	.06112 .99723	.06991 .99637	.07873 .99540	.08757 .99430
.80	.00871 .99994	.01742 .99974	.02613 .99942	.03486 .99897	.04360 .99839	.05235 .99768	.06112 .99683	.06991 .99586	.07873 .99475	.08757 .99350
.90	.00871 .99993	.01742 .99971	.02613 .99935	.03486 .99884	.04360 .99819	.05235 .99739	.06112 .99644	.06991 .99534	.07873 .99410	.08757 .99270
1.00	.00871 .99992	.01742 .99968	.02613 .99920	.03486 .99871	.04360 .99799	.05235 .99710	.06112 .99605	.06991 .99483	.07873 .99345	.08757 .99191

$$\frac{U/K+V/K}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 45$$

B	1/A = .01	1/A = .02	1/A = .03	1/A = .04	1/A = .05	1/A = .06	1/A = .07	1/A = .08	1/A = .09	1/A = .10
0.00	.00763 1.00000	.01526 1.00000	.02289 1.00000	.03053 1.00000	.03819 1.00000	.04585 1.00000	.05352 1.00000	.06122 1.00000	.06893 1.00000	.07666 1.00000
.10	.00763 .99999	.01526 .99997	.02289 .99993	.03053 .99988	.03816 .99981	.04585 .99972	.05352 .99962	.06121 .99951	.06892 .99937	.07665 .99923
.20	.00763 .99998	.01526 .99994	.02289 .99986	.03053 .99976	.03818 .99962	.04584 .99945	.05351 .99925	.06120 .99901	.06891 .99875	.07663 .99845
.30	.00763 .99998	.01526 .99991	.02289 .99979	.03053 .99963	.03818 .99943	.04583 .99917	.05350 .99887	.06118 .99852	.06888 .99813	.07659 .99768
.40	.00763 .99997	.01526 .99988	.02289 .99973	.03053 .99951	.03817 .99923	.04582 .99890	.05348 .99850	.06115 .99803	.06884 .99750	.07654 .99691
.50	.00763 .99996	.01526 .99985	.02289 .99966	.03052 .99939	.03816 .99904	.04581 .99862	.05346 .99812	.06112 .99754	.06879 .99688	.07646 .99614
.60	.00763 .99995	.01526 .99982	.02289 .99959	.03052 .99927	.03815 .99885	.04579 .99835	.05343 .99774	.06107 .99705	.06872 .99626	.07638 .99537
.70	.00763 .99995	.01526 .99979	.02288 .99952	.03051 .99914	.03814 .99866	.04577 .99807	.05339 .99737	.06102 .99656	.06865 .99564	.07628 .99461
.80	.00763 .99994	.01525 .99976	.02288 .99945	.03050 .99902	.03812 .99847	.04574 .99780	.05336 .99700	.06096 .99607	.06857 .99502	.07616 .99385
.90	.00763 .99993	.01525 .99973	.02288 .99938	.03050 .99890	.03811 .99828	.04571 .99752	.05331 .99662	.06090 .99559	.06847 .99441	.07603 .99309
1.00	.00763 .99992	.01525 .99969	.02287 .99931	.03049 .99878	.03809 .99809	.04568 .99725	.05326 .99625	.06082 .99510	.06836 .99380	.07588 .99234

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN(A+IB)$$

$$K=\sin 50$$

B	1/A = .01	1/A = .02	1/A = .03	1/A = .04	1/A = .05	1/A = .06	1/A = .07	1/A = .08	1/A = .09	1/A = .10
0.00	.00674 1.00000	.01349 1.00000	.02024 1.00000	.02700 1.00000	.03376 1.00000	.04053 1.00000	.04731 1.00000	.05411 1.00000	.06092 1.00000	.06775 1.00000
.10	.00674 .99999	.01349 .99997	.02024 .99993	.02700 .99988	.03376 .99982	.04053 .99974	.04731 .99964	.05411 .99953	.06092 .99940	.06774 .99926
.20	.00674 .99999	.01349 .99994	.02024 .99987	.02699 .99977	.03376 .99963	.04053 .99947	.04731 .99928	.05411 .99906	.06090 .99880	.06772 .99852
.30	.00674 .99998	.01349 .99991	.02024 .99980	.02699 .99965	.03375 .99945	.04052 .99921	.04729 .99892	.05408 .99859	.06089 .99821	.06769 .99778
.40	.00674 .99997	.01349 .99988	.02024 .99974	.02699 .99953	.03375 .99927	.04051 .99894	.04728 .99856	.05405 .99812	.06084 .99761	.06764 .99704
.50	.00674 .99996	.01349 .99985	.02024 .99967	.02699 .99941	.03374 .99908	.04049 .99860	.04726 .99820	.05402 .99765	.06080 .99701	.06758 .99631
.60	.00674 .99996	.01349 .99982	.02023 .99961	.02698 .99930	.03373 .99890	.04048 .99842	.04723 .99784	.05398 .99718	.06074 .99642	.06750 .99557
.70	.00674 .99995	.01349 .99980	.02023 .99954	.02698 .99918	.03372 .99872	.04046 .99815	.04720 .99748	.05394 .99671	.06068 .99583	.06741 .99484
.80	.00674 .99994	.01349 .99977	.02023 .99947	.02627 .99906	.03371 .99854	.04044 .99789	.04716 .99713	.05389 .99624	.06060 .99524	.06731 .99411
.90	.00674 .99993	.01349 .99974	.02023 .99941	.02696 .99895	.03369 .99835	.04041 .99763	.04713 .99677	.05383 .99578	.06052 .99465	.06719 .99339
1.00	.00674 .99993	.01349 .99971	.02022 .99934	.02695 .99883	.03367 .99817	.04038 .99737	.04708 .99641	.05376 .99531	.06042 .99407	.06706 .99267

$$\frac{U/K + IV/K'}{-1}$$

$$U + IV = SN \quad (A + IB)$$

K = SIN 55

B	1/A = .01	1/A = .02	1/A = .03	1/A = .04	1/A = .05	1/A = .06	1/A = .07	1/A = .08	1/A = .09	1/A = .10
0.00	.00600 1.00000	.01200 1.00000	.01801 1.00000	.02401 1.00000	.03003 1.00000	.03605 1.00000	.04208 1.00000	.04813 1.00000	.05418 1.00000	.06025 1.00000
.10	.00600 .99999	.01200 .99997	.01801 .99994	.02401 .99989	.03003 .99982	.03605 .99975	.04208 .99965	.04812 .99955	.05418 .99942	.06024 .99929
.20	.00600 .99999	.01200 .99994	.01801 .99987	.02401 .99977	.03003 .99965	.03605 .99949	.04208 .99930	.04811 .99909	.05415 .99885	.06022 .99857
.30	.00600 .99998	.01200 .99992	.01800 .99981	.02401 .99966	.03002 .99947	.03604 .99924	.04207 .99898	.04810 .99864	.05414 .99827	.06019 .99785
.40	.00600 .99997	.01200 .99989	.01800 .99975	.02401 .99955	.03002 .99929	.03603 .99894	.04205 .99861	.04808 .99818	.05411 .99770	.06015 .99715
.50	.00600 .99996	.01200 .99986	.01800 .99968	.02401 .99943	.03001 .99912	.03602 .99871	.04203 .99826	.04805 .99773	.05407 .99712	.06009 .99644
.60	.00600 .99996	.01200 .99983	.01800 .99962	.02400 .99932	.03000 .99894	.03601 .99847	.04201 .99792	.04801 .99728	.05402 .99655	.06003 .99573
.70	.00600 .99995	.01200 .99980	.01800 .99956	.02400 .99921	.02999 .99876	.03599 .99822	.04198 .99757	.04797 .99683	.05396 .99598	.05995 .99503
.80	.00600 .99994	.01200 .99977	.01800 .99949	.02399 .99910	.02998 .99859	.03597 .99796	.04195 .99723	.04793 .99638	.05390 .99541	.05986 .99433
.90	.00600 .99994	.01200 .99975	.01799 .99943	.02398 .99898	.02997 .99841	.03595 .99771	.04192 .99688	.04787 .99593	.05382 .99484	.05975 .99363
1.00	.00600 .99993	.01200 .99972	.01799 .99937	.02398 .99887	.02995 .99824	.03592 .99746	.04188 .99654	.04782 .99548	.05374 .99428	.05964 .99293

$$\frac{U/K+IV/K'}{-1}$$

$$J+IV=SN \quad (A+18)$$

$$K=\sin \epsilon_0$$

B	1/A= .01	1/A= .02	1/A= .03	1/A= .04	1/A= .05	1/A= .06	1/A= .07	1/A= .08	1/A= .09	1/A= .10
0.00	.00535 1.00000	.01071 1.00000	.01607 1.00000	.02143 1.00000	.02680 1.00000	.03217 1.00000	.03755 1.00000	.04294 1.00000	.04834 1.00000	.05375 1.00000
.10	.00535 .99999	.01071 .99997	.01607 .99994	.02143 .99989	.02680 .99983	.03217 .99975	.03755 .99966	.04294 .99956	.04834 .99944	.05375 .99931
.20	.00535 .99999	.01071 .99995	.01607 .99988	.02143 .99978	.02680 .99966	.03217 .99950	.03755 .99932	.04294 .99912	.04834 .99888	.05375 .99861
.30	.00535 .99998	.01071 .99992	.01607 .99981	.02143 .99967	.02679 .99948	.03216 .99926	.03754 .99899	.04292 .99868	.04831 .99832	.05371 .99792
.40	.00535 .99997	.01071 .99989	.01607 .99975	.02143 .99958	.02679 .99931	.03215 .99901	.03752 .99865	.04290 .99824	.04828 .99776	.05367 .99723
.50	.00535 .99997	.01071 .99986	.01607 .99969	.02142 .99945	.02678 .99914	.03214 .99876	.03751 .99831	.04287 .99780	.04824 .99721	.05362 .99654
.60	.00535 .99996	.01071 .99984	.01606 .99963	.02142 .99934	.02677 .99897	.03213 .99852	.03749 .99798	.04284 .99736	.04820 .99665	.05356 .99586
.70	.00535 .99995	.01071 .99981	.01606 .99957	.02141 .99923	.02677 .99880	.03211 .99827	.03746 .99764	.04281 .99692	.04815 .99609	.05349 .99517
.80	.00535 .99995	.01071 .99978	.01606 .99951	.02141 .99912	.02676 .99863	.03210 .99802	.03743 .99731	.04277 .99648	.04809 .99554	.05341 .99449
.90	.00535 .99994	.01071 .99975	.01606 .99944	.02140 .99901	.02674 .99846	.03208 .99778	.03740 .99697	.04272 .99605	.04802 .99499	.05331 .99381
1.00	.00535 .99993	.01071 .99973	.01605 .99938	.02140 .99890	.02673 .99829	.03206 .99753	.03737 .99664	.04267 .99561	.04795 .99444	.05321 .99314

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

K=SN 65

B	1/A= .01	1/A= .02	1/A= .03	1/A= .04	1/A= .05	1/A= .06	1/A= .07	1/A= .08	1/A= .09	1/A= .10
0.00	.00478 1.00000	.00956 1.00000	.01434 1.00000	.01913 1.00000	.02392 1.00000	.02871 1.00000	.03351 1.00000	.03832 1.00000	.04314 1.00000	.04797 1.00000
.10	.00478 .99999	.00956 .99997	.01434 .99994	.01913 .99989	.02392 .99983	.02871 .99976	.03351 .99967	.03832 .99957	.04314 .99945	.04796 .99932
.20	.00478 .99999	.00956 .99995	.01434 .99988	.01913 .99979	.02391 .99966	.02871 .99952	.03351 .99934	.03831 .99914	.04313 .99891	.04795 .99865
.30	.00478 .99998	.00956 .99992	.01434 .99982	.01912 .99968	.02391 .99950	.02870 .99927	.03350 .99901	.03830 .99871	.04311 .99836	.04792 .99797
.40	.00478 .99997	.00956 .99989	.01434 .99976	.01912 .99957	.02391 .99933	.02870 .99903	.03349 .99868	.03828 .99828	.04308 .99782	.04789 .99730
.50	.00478 .99997	.00956 .99987	.01434 .99970	.01912 .99946	.02390 .99916	.02869 .99879	.03347 .99835	.03826 .99785	.04305 .99727	.04785 .99663
.60	.00478 .99996	.00956 .99984	.01434 .99964	.01912 .99936	.02390 .99899	.02868 .99855	.03345 .99803	.03823 .99742	.04301 .99673	.04779 .99596
.70	.00478 .99995	.00956 .99981	.01434 .99956	.01911 .99925	.02389 .99883	.02866 .99831	.03343 .99770	.03820 .99699	.04297 .99619	.04773 .99529
.80	.00478 .99995	.00956 .99979	.01433 .99952	.01911 .99914	.02388 .99866	.02865 .99807	.03341 .99737	.03816 .99656	.04291 .99565	.04768 .99462
.90	.00478 .99994	.00956 .99976	.01433 .99946	.01910 .99904	.02387 .99849	.02863 .99783	.03338 .99704	.03812 .99614	.04286 .99511	.04758 .99396
1.00	.00478 .99993	.00956 .99973	.01433 .99940	.01910 .99893	.02386 .99833	.02861 .99759	.03335 .99672	.03808 .99571	.04279 .99456	.04748 .99330

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 70$$

B	1/A= .01	1/A= .02	1/A= .03	1/A= .04	1/A= .05	1/A= .06	1/A= .07	1/A= .08	1/A= .09	1/A= .10
0.00	.00425 1.00000	.00850 1.00000	.01275 1.00000	.01701 1.00000	.02126 1.00000	.02553 1.00000	.02979 1.00000	.03407 1.00000	.03835 1.00000	.04264 1.00000
.10	.00425 .99999	.00850 .99997	.01275 .99994	.01701 .99989	.02126 .99984	.02553 .99975	.02979 .99968	.03407 .99958	.03835 .99946	.04264 .99934
.20	.00425 .99999	.00850 .99995	.01275 .99988	.01700 .99979	.02126 .99967	.02552 .99953	.02979 .99935	.03406 .99915	.03834 .99893	.04262 .99867
.30	.00425 .99998	.00850 .99992	.01275 .99982	.01700 .99968	.02126 .99951	.02552 .99929	.02977 .99903	.03405 .99873	.03832 .99839	.04260 .99801
.40	.00425 .99997	.00850 .99989	.01275 .99976	.01700 .99958	.02126 .99934	.02551 .99905	.02977 .99871	.03403 .99831	.03830 .99786	.04257 .99735
.50	.00425 .99997	.00850 .99987	.01275 .99970	.01700 .99947	.02126 .99912	.02550 .99881	.02976 .99838	.03401 .99789	.03827 .99732	.04253 .99669
.60	.00425 .99996	.00850 .99984	.01275 .99965	.01700 .99937	.02124 .99901	.02549 .99858	.02974 .99806	.03399 .99747	.03824 .99679	.04249 .99603
.70	.00425 .99995	.00850 .99982	.01275 .99959	.01699 .99926	.02124 .99885	.02548 .99834	.02972 .99774	.03396 .99705	.03820 .99626	.04243 .99538
.80	.00425 .99995	.00850 .99979	.01274 .99953	.01699 .99916	.02123 .99868	.02547 .99811	.02970 .99742	.03393 .99663	.03815 .99573	.04237 .99472
.90	.00425 .99994	.00850 .99976	.01274 .99947	.01698 .99905	.02122 .99852	.02545 .99787	.02968 .99719	.03389 .99621	.03810 .99520	.04229 .99407
1.00	.00425 .99993	.00850 .99974	.01274 .99941	.01698 .99895	.02121 .99836	.02543 .99763	.02965 .99678	.03385 .99579	.03804 .99468	.04221 .99343

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

K=SIN 75

B	1/A= .01	1/A= .02	1/A= .03	1/A= .04	1/A= .05	1/A= .06	1/A= .07	1/A= .08	1/A= .09	1/A= .10
0.00	.00374 1.00000	.00748 1.00000	.01122 1.00000	.01497 1.00000	.01872 1.00000	.02247 1.00000	.02622 1.00000	.02999 1.00000	.03376 1.00000	.03753 1.00000
.10	.00374 .99999	.00748 .99997	.01122 .99994	.01497 .99990	.01872 .99984	.02247 .99977	.02622 .99968	.02999 .99958	.03375 .99947	.03753 .99937
.20	.00374 .99999	.00748 .99995	.01122 .99988	.01497 .99979	.01871 .99968	.02247 .99953	.02622 .99936	.02998 .99917	.03374 .99894	.03752 .99869
.30	.00374 .99998	.00748 .99992	.01122 .99982	.01497 .99969	.01871 .99951	.02246 .99930	.02621 .99904	.02997 .99875	.03373 .99841	.03750 .99804
.40	.00374 .99997	.00748 .99990	.01122 .99977	.01496 .99958	.01871 .99935	.02246 .99906	.02620 .99872	.02996 .99833	.03371 .99789	.03747 .99739
.50	.00374 .99997	.00748 .99987	.01122 .99971	.01496 .99948	.01870 .99919	.02245 .99883	.02619 .99841	.02994 .99792	.03369 .99736	.03744 .99674
.60	.00374 .99996	.00748 .99984	.01122 .99965	.01496 .99938	.01870 .99903	.02244 .99860	.02618 .99809	.02992 .99750	.03366 .99683	.03739 .99609
.70	.00374 .99995	.00748 .99982	.01122 .99959	.01496 .99927	.01869 .99886	.02243 .99836	.02616 .99777	.02989 .99709	.03362 .99631	.03734 .99544
.80	.00374 .99995	.00748 .99979	.01122 .99953	.01495 .99917	.01869 .99870	.02242 .99813	.02614 .99746	.02986 .99667	.03358 .99579	.03729 .99480
.90	.00374 .99994	.00748 .99977	.01122 .99948	.01495 .99907	.01868 .99854	.02240 .99790	.02612 .99714	.02983 .99626	.03353 .99527	.03722 .99416
1.00	.00374 .99994	.00748 .99974	.01121 .99942	.01494 .99896	.01867 .99838	.02239 .99767	.02610 .99683	.02979 .99585	.03348 .99475	.03715 .99352

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin \theta$$

B	1/A= .01	1/A= .02	1/A= .03	1/A= .04	1/A= .05	1/A= .06	1/A= .07	1/A= .08	1/A= .09	1/A= .10
0.00	.00322 1.00000	.00644 1.00000	.00966 1.00000	.01289 1.00000	.01611 1.00000	.01934 1.00000	.02258 1.00000	.02582 1.00000	.02906 1.00000	.03231 1.00000
.10	.00322 .99999	.00644 .99997	.00966 .99994	.01289 .99990	.01611 .99984	.01934 .99977	.02258 .99968	.02582 .99959	.02906 .99948	.03231 .99935
.20	.00322 .99999	.00644 .99995	.00966 .99988	.01289 .99979	.01611 .99968	.01934 .99954	.02257 .99937	.02581 .99917	.02905 .99895	.03230 .99870
.30	.00322 .99998	.00644 .99992	.00966 .99983	.01289 .99969	.01611 .99952	.01934 .99930	.02257 .99905	.02580 .99876	.02904 .99843	.03228 .99806
.40	.00322 .99997	.00644 .99990	.00966 .99977	.01288 .99959	.01611 .99936	.01933 .99907	.02256 .99874	.02579 .99835	.02902 .99791	.03226 .99741
.50	.00322 .99997	.00644 .99987	.00966 .99971	.01288 .99949	.01610 .99920	.01933 .99884	.02255 .99842	.02578 .99794	.02900 .99739	.03223 .99677
.60	.00322 .99996	.00644 .99985	.00966 .99965	.01288 .99938	.01610 .99904	.01932 .99861	.02254 .99811	.02576 .99753	.02898 .99687	.03219 .99613
.70	.00322 .99996	.00644 .99982	.00966 .99960	.01288 .99928	.01609 .99888	.01931 .99838	.02252 .99779	.02574 .99712	.02894 .99635	.03215 .99549
.80	.00322 .99995	.00644 .99979	.00966 .99954	.01287 .99910	.01609 .99872	.01930 .99815	.02251 .99748	.02571 .99671	.02891 .99583	.03210 .99485
.90	.00322 .99994	.00644 .99977	.00966 .99948	.01287 .99908	.01608 .99856	.01929 .99792	.02249 .99717	.02568 .99630	.02887 .99532	.03205 .99422
1.00	.00322 .99994	.00644 .99974	.00965 .99942	.01287 .99897	.01607 .99840	.01927 .99763	.02247 .99686	.02565 .99589	.02882 .99480	.03199 .99358

$$\frac{U/K + IV/K'}{J + IV = SN} - 1 \quad (A + iB)$$

K = SIN 85

B	1/A = .01	1/A = .02	1/A = .03	1/A = .04	1/A = .05	1/A = .06	1/A = .07	1/A = .08	1/A = .09	1/A = .10
0.00	.00262 1.00000	.00524 1.00000	.00786 1.00000	.01048 1.00000	.01311 1.00000	.01574 1.00000	.01837 1.00000	.02100 1.00000	.02364 1.00000	.02629 1.00000
.10	.00262 .99999	.00524 .99997	.00786 .99994	.01048 .99990	.01311 .99984	.01574 .99977	.01837 .99969	.02100 .99959	.02364 .99948	.02629 .99936
.20	.00262 .99999	.00524 .99995	.00786 .99989	.01048 .99980	.01311 .99968	.01574 .99954	.01837 .99937	.02100 .99918	.02364 .99896	.02629 .99871
.30	.00262 .99998	.00524 .99992	.00786 .99983	.01048 .99969	.01311 .99952	.01574 .99931	.01837 .99906	.02100 .99877	.02364 .99844	.02629 .99807
.40	.00262 .99997	.00524 .99990	.00786 .99977	.01048 .99959	.01311 .99936	.01574 .99908	.01837 .99874	.02100 .99836	.02364 .99792	.02629 .99743
.50	.00262 .99997	.00524 .99987	.00786 .99971	.01048 .99949	.01311 .99920	.01574 .99885	.01837 .99843	.02100 .99795	.02364 .99740	.02629 .99679
.60	.00262 .99996	.00524 .99985	.00786 .99966	.01048 .99939	.01311 .99904	.01574 .99862	.01837 .99812	.02100 .99754	.02364 .99688	.02629 .99615
.70	.00262 .99996	.00524 .99982	.00786 .99960	.01048 .99929	.01311 .99888	.01574 .99834	.01837 .99781	.02100 .99713	.02364 .99637	.02629 .99551
.80	.00262 .99995	.00524 .99980	.00786 .99954	.01048 .99918	.01311 .99872	.01574 .99815	.01837 .99750	.02100 .99673	.02364 .99595	.02629 .99508
.90	.00262 .99994	.00524 .99977	.00786 .99948	.01048 .99908	.01311 .99856	.01574 .99793	.01837 .99718	.02100 .99632	.02364 .99544	.02629 .99425
1.00	.00262 .99994	.00524 .99974	.00786 .99943	.01048 .99908	.01311 .99841	.01574 .99770	.01837 .99697	.02100 .99592	.02364 .99483	.02629 .99352

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+B)$$

$$K=\sin 86$$

B	1/A= .01	1/A= .02	1/A= .03	1/A= .04	1/A= .05	1/A= .06	1/A= .07	1/A= .08	1/A= .09	1/A= .10
0.00	.00247 1.00000	.00495 1.00000	.00742 1.00000	.00990 1.00000	.01238 1.00000	.01486 1.00000	.01734 1.00000	.01983 1.00000	.02232 1.00000	.02482 1.00000
.10	.00247 .99999	.00495 .99997	.00742 .99994	.00990 .99990	.01238 .99984	.01486 .99977	.01734 .99969	.01983 .99959	.02232 .99948	.02482 .99936
.20	.00247 .99999	.00495 .99995	.00742 .99989	.00990 .99980	.01238 .99968	.01486 .99954	.01734 .99937	.01983 .99918	.02231 .99896	.02481 .99871
.30	.00247 .99998	.00495 .99992	.00742 .99983	.00990 .99969	.01237 .99952	.01485 .99931	.01734 .99906	.01982 .99877	.02231 .99844	.02480 .99807
.40	.00247 .99997	.00495 .99990	.00742 .99977	.00990 .99959	.01237 .99936	.01485 .99908	.01733 .99875	.01981 .99836	.02229 .99792	.02478 .99743
.50	.00247 .99997	.00495 .99987	.00742 .99971	.00990 .99949	.01237 .99920	.01485 .99881	.01732 .99843	.01980 .99795	.02228 .99740	.02476 .99679
.60	.00247 .99996	.00495 .99985	.00742 .99966	.00989 .99939	.01237 .99904	.01484 .99862	.01731 .99812	.01978 .99754	.02226 .99689	.02473 .99615
.70	.00247 .99996	.00495 .99982	.00742 .99960	.00989 .99929	.01236 .99888	.01483 .99831	.01730 .99781	.01977 .99714	.02223 .99637	.02469 .99552
.80	.00247 .99995	.00495 .99980	.00742 .99954	.00989 .99918	.01236 .99872	.01483 .99811	.01729 .99750	.01975 .99673	.02221 .99586	.02466 .99488
.90	.00247 .99994	.00495 .99977	.00742 .99948	.00989 .99908	.01235 .99857	.01482 .99793	.01727 .99719	.01973 .99632	.02217 .99535	.02462 .99425
1.00	.00247 .99994	.00495 .99975	.00742 .99943	.00988 .99938	.01235 .99841	.01481 .99771	.01726 .99688	.01970 .99592	.02214 .99484	.02457 .99363

$$\frac{U/\kappa + IV/\kappa'}{-1}$$

$$U + IV = SN \quad (A + iB)$$

$$K = \sin 87$$

B	1/A = .01	1/A = .02	1/A = .03	1/A = .04	1/A = .05	1/A = .06	1/A = .07	1/A = .08	1/A = .09	1/A = .10
0.00	.00231 1.00000	.00462 1.00000	.00693 1.00000	.00924 1.00000	.01155 1.00000	.01386 1.00000	.01618 1.00000	.01850 1.00000	.02083 1.00000	.02316 1.00000
.10	.00231 .99999	.00462 .99997	.00693 .99994	.00924 .99990	.01155 .99984	.01386 .99977	.01618 .99969	.01850 .99959	.02083 .99948	.02316 .99936
.20	.00231 .99999	.00462 .99995	.00693 .99989	.00924 .99980	.01155 .99968	.01386 .99954	.01618 .99937	.01850 .99918	.02083 .99896	.02316 .99871
.30	.00231 .99998	.00462 .99992	.00693 .99983	.00924 .99969	.01155 .99952	.01386 .99931	.01618 .99906	.01850 .99877	.02083 .99844	.02316 .99807
.40	.00231 .99997	.00462 .99987	.00693 .99977	.00923 .99959	.01155 .99936	.01386 .99909	.01617 .99875	.01848 .99836	.02080 .99792	.02312 .99743
.50	.00231 .99997	.00462 .99985	.00692 .99971	.00923 .99949	.01154 .99920	.01385 .99885	.01616 .99843	.01847 .99795	.02079 .99740	.02310 .99679
.60	.00231 .99996	.00462 .99985	.00692 .99966	.00923 .99939	.01154 .99904	.01385 .99862	.01615 .99812	.01846 .99754	.02077 .99689	.02307 .99615
.70	.00231 .99996	.00462 .99982	.00692 .99960	.00923 .99929	.01154 .99886	.01384 .99839	.01614 .99781	.01845 .99714	.02075 .99637	.02304 .99552
.80	.00231 .99995	.00462 .99980	.00692 .99954	.00923 .99918	.01153 .99872	.01383 .99816	.01613 .99750	.01843 .99673	.02072 .99586	.02301 .99489
.90	.00231 .99994	.00462 .99977	.00692 .99948	.00923 .99908	.01153 .99857	.01382 .99793	.01612 .99719	.01841 .99633	.02069 .99535	.02297 .99426
1.00	.00231 .99994	.00461 .99975	.00692 .99943	.00922 .99908	.01152 .99841	.01381 .99771	.01610 .99688	.01838 .99592	.02066 .99484	.02292 .99363

$$U/K + iV/K,$$

$$-1$$

$$U + iV = SN \quad (A + iB)$$

$$K = \sin \theta$$

θ	$1/A = .01$	$1/A = .02$	$1/A = .03$	$1/A = .04$	$1/A = .05$	$1/A = .06$	$1/A = .07$	$1/A = .08$	$1/A = .09$	$1/A = .10$
0.00	.0 1.00	.00422 1.00000	.00633 1.00000	.00844 1.00000	.01056 1.00000	.01267 1.00000	.01479 1.00000	.01691 1.00000	.01904 1.00000	.02117 1.00000
.10	.00211 .99999	.00422 .99997	.00633 .99994	.00844 .99990	.01056 .99984	.01267 .99977	.01479 .99969	.01691 .99959	.01904 .99948	.02117 .99935
.20	.00211 .99999	.00422 .99995	.00633 .99989	.00844 .99983	.01056 .99968	.01267 .99954	.01479 .99937	.01691 .99918	.01904 .99896	.02117 .99871
.30	.00211 .99996	.00422 .99992	.00633 .99983	.00844 .99968	.01056 .99952	.01267 .99931	.01479 .99906	.01691 .99877	.01904 .99844	.02117 .99807
.40	.00211 .99997	.00422 .99990	.00633 .99977	.00844 .99959	.01056 .99936	.01267 .99916	.01479 .99891	.01691 .99863	.01904 .99836	.02117 .99809
.50	.00211 .99997	.00422 .99987	.00633 .99971	.00844 .99949	.01056 .99920	.01267 .99895	.01479 .99869	.01691 .99841	.01904 .99814	.02117 .99787
.60	.00211 .99996	.00422 .99985	.00633 .99966	.00844 .99939	.01056 .99904	.01267 .99869	.01479 .99843	.01691 .99815	.01904 .99788	.02117 .99761
.70	.00211 .99996	.00422 .99982	.00633 .99960	.00844 .99923	.01056 .99888	.01267 .99853	.01479 .99827	.01691 .99799	.01904 .99772	.02117 .99745
.80	.00211 .99995	.00422 .99980	.00633 .99954	.00844 .99918	.01056 .99883	.01267 .99848	.01479 .99822	.01691 .99795	.01904 .99768	.02117 .99741
.90	.00211 .99994	.00422 .99977	.00633 .99948	.00844 .99912	.01056 .99877	.01267 .99842	.01479 .99816	.01691 .99789	.01904 .99762	.02117 .99735
1.00	.00211 .99994	.00422 .99975	.00633 .99947	.00844 .99910	.01056 .99875	.01267 .99840	.01479 .99814	.01691 .99787	.01904 .99760	.02117 .99733

$$U/R + IV/K' \\ -1 \\ U + IV = SN' (A + I8)$$

$$K = \sin \theta_9$$

B	1/A= .01	1/A= .02	1/A= .03	1/A= .04	1/A= .05	1/A= .06	1/A= .07	1/A= .08	1/A= .09	1/A= .10
0.00	.00184 1.00000	.00368 1.00000	.00552 1.00000	.00736 1.00000	.00921 1.00000	.01105 1.00000	.01290 1.00000	.01475 1.00000	.01661 1.00000	.01846 1.00000
.10	.00184 .99999	.00368 .99997	.00552 .99994	.00736 .99990	.00921 .99984	.01105 .99977	.01290 .99969	.01475 .99959	.01661 .99948	.01846 .99936
.20	.00184 .99999	.00368 .99995	.00552 .99989	.00736 .99980	.00921 .99968	.01105 .99954	.01290 .99937	.01475 .99918	.01661 .99896	.01846 .99871
.30	.00184 .99998	.00368 .99992	.00552 .99983	.00736 .99969	.00921 .99952	.01105 .99931	.01290 .99906	.01475 .99877	.01661 .99844	.01846 .99807
.40	.00184 .99997	.00368 .99990	.00552 .99977	.00736 .99959	.00921 .99936	.01105 .99902	.01290 .99875	.01475 .99836	.01661 .99792	.01846 .99743
.50	.00184 .99997	.00368 .99987	.00552 .99971	.00736 .99949	.00921 .99920	.01105 .99885	.01290 .99843	.01475 .99795	.01661 .99741	.01846 .99679
.60	.00184 .99996	.00368 .99985	.00552 .99966	.00736 .99935	.00921 .99904	.01105 .99862	.01290 .99812	.01475 .99755	.01661 .99689	.01846 .99616
.70	.00184 .99996	.00368 .99982	.00552 .99960	.00736 .99929	.00921 .99888	.01105 .99839	.01290 .99781	.01475 .99714	.01661 .99638	.01846 .99552
.80	.00184 .99995	.00368 .99980	.00552 .99954	.00736 .99918	.00921 .99873	.01105 .99816	.01290 .99750	.01475 .99673	.01661 .99586	.01846 .99489
.90	.00184 .99994	.00368 .99977	.00552 .99948	.00736 .99908	.00921 .99857	.01105 .99794	.01290 .99719	.01475 .99633	.01661 .99535	.01846 .99426
1.00	.00184 .99994	.00368 .99975	.00552 .99943	.00736 .99898	.00921 .99841	.01105 .99771	.01290 .99688	.01475 .99593	.01661 .99484	.01846 .99363

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 5$$

B	1/A= .10	1/A= .20	1/A= .30	1/A= .40	1/A= .50	1/A= .60	1/A= .70	1/A= .80	1/A= .90	1/A=1.00
0.00	1.00000 .05941	1.00000 .61258	1.00000 .49541	1.00000 .41258	1.00000 .34610	1.00000 .28338	1.00000 .23490	1.00000 .18171	1.00000 .12242	1.00000 .00000
.10	.98698 .85935	.93559 .61263	.97912 .49554	.97161 .41285	.96281 .34659	.95200 .28328	.93771 .23663	.91650 .18541	.87866 .13293	.79997 .08350
.20	.97400 .85918	.97120 .61277	.95829 .49593	.94335 .41364	.92597 .34806	.90494 .29194	.87804 .24151	.84132 .19492	.78695 .15267	.71956 .11896
.30	.96109 .85890	.95682 .61301	.93755 .49657	.91536 .41495	.88983 .35046	.85952 .29615	.82271 .24882	.77680 .20749	.72113 .17296	.65965 .14570
.40	.94829 .85852	.94249 .61334	.91695 .49746	.88776 .41675	.85466 .35370	.81557 .30156	.77233 .25779	.72164 .22129	.66640 .19225	.61071 .17048
.50	.93562 .85813	.92820 .61377	.89652 .49860	.86065 .41901	.82068 .35769	.77608 .30818	.72678 .26779	.67396 .23542	.62033 .21041	.56900 .19173
.60	.92311 .85747	.91397 .61429	.87630 .49997	.83412 .42171	.78805 .36233	.73824 .31548	.68562 .27836	.63218 .24947	.58047 .22753	.53260 .21117
.70	.91178 .85682	.89982 .61489	.85634 .50156	.80826 .42480	.75684 .36752	.70299 .32334	.64334 .28922	.59511 .26324	.54536 .24375	.50034 .22522
.80	.89865 .85611	.88574 .61559	.83666 .50338	.78312 .42825	.72711 .37315	.67021 .33159	.61445 .30018	.56191 .27667	.51405 .25918	.47144 .24613
.90	.88672 .85534	.87176 .61637	.81729 .50539	.75875 .43202	.69886 .37915	.63973 .34006	.58352 .31111	.53194 .28972	.48586 .27390	.44535 .26210
1.00	.87501 .85452	.85788 .61724	.79826 .50760	.73517 .43606	.67206 .38542	.61137 .34870	.55518 .32194	.50471 .30236	.46030 .28799	.42165 .27725

$$\frac{U/K+IV/K}{U+IV=SN^{-1} (A+IB)}$$

$$K=\sin 10$$

B	1/A= .10	1/A= .20	1/A= .30	1/A= .40	1/A= .50	1/A= .60	1/A= .70	1/A= .80	1/A= .90	1/A=1.00
0.00	.38839 1.00000	1.00000 .62448	1.00000 .62850	1.00000 .51571	1.00000 .42967	1.00000 .35665	1.00000 .28982	1.00000 .22382	1.00000 .15060	1.00000 .00000
.10	.38833 .99776	.97405 .82422	.97564 .62870	.96942 .51601	.96117 .43025	.95066 .35774	.93655 .29191	.91544 .22033	.87759 .16349	.79865 .10255
.20	.39816 .99551	.94838 .82346	.95135 .62903	.93897 .51688	.92269 .43190	.90228 .36092	.87575 .29782	.83924 .23992	.78694 .18763	.71751 .14599
.30	.38789 .99328	.92321 .82225	.92717 .62957	.90881 .51832	.88493 .43478	.85564 .36595	.81930 .30667	.77373 .25522	.71827 .21240	.65691 .17988
.40	.38750 .99104	.89872 .82068	.90316 .63032	.87304 .52031	.84814 .43857	.81128 .37253	.76781 .31750	.71763 .27198	.66273 .23588	.60728 .20887
.50	.38699 .98882	.87502 .81885	.87938 .63128	.84980 .52280	.81256 .44322	.76950 .38032	.72117 .32954	.66902 .28909	.61586 .25793	.56490 .23471
.60	.38639 .98661	.85215 .81583	.85587 .63244	.82116 .52576	.77715 .442	.73039 .38900	.67895 .34225	.62633 .30606	.57522 .27867	.52783 .25827
.70	.38567 .98442	.83013 .81472	.83268 .63378	.79323 .52915	.74559 .45464	.69389 .39832	.64063 .35526	.58837 .32265	.53935 .29825	.49490 .28009
.80	.38485 .98223	.80894 .81256	.80986 .63531	.76605 .53292	.71432 .46116	.65987 .40806	.60571 .36825	.55430 .33877	.50728 .31683	.46533 .30049
.90	.38392 .98007	.78854 .81042	.78743 .63700	.73968 .53702	.68457 .46887	.62818 .41306	.57376 .38136	.52346 .35439	.47834 .33449	.43858 .31968
1.00	.38293 .97793	.76889 .80832	.76544 .63886	.71415 .54141	.65629 .47528	.59863 .42820	.54443 .39421	.49538 .36949	.45204 .35134	.41423 .33784

$$\frac{U+IV/K'}{-1}$$

$$U+IV=SN (A+IC)$$

K SYN 15

B	1/A= .10	1/A= .20	1/A= .30	1/A= .40	1/A= .50	1/A= .60	1/A= .70	1/A= .80	1/A= .90	1/A=1.00
0.00	.24655 1.00000	.55680 1.00000	1.00000 .79089	1.00000 .61948	1.00000 .50845	1.00000 .41807	1.00000 .33886	1.00000 .26091	1.00000 .17520	1.00000 .00000
.10	.24652 .99848	.55626 .99104	.96123 .79029	.96422 .61968	.95784 .50904	.94815 .42007	.93447 .34122	.91358 .26698	.87572 .19008	.79641 .11895
.20	.24653 .99836	.55463 .98216	.92325 .78858	.92864 .62026	.91609 .51078	.89727 .42355	.87161 .34768	.83557 .27933	.78246 .21787	.71400 .16908
.30	.24839 .99544	.55197 .97343	.88666 .78603	.89346 .62122	.87507 .51360	.84819 .42905	.81315 .35783	.76835 .29677	.71333 .24627	.65222 .20804
.40	.24819 .99393	.54835 .96494	.85180 .78295	.85807 .62254	.83512 .51739	.80143 .43620	.75971 .36996	.71060 .31578	.65641 .27307	.60145 .24120
.50	.24793 .99242	.54394 .95674	.81875 .77961	.82503 .62422	.79649 .52204	.75732 .44463	.71118 .38338	.66042 .33510	.60820 .29811	.55794 .27062
.60	.24761 .99041	.53854 .94886	.78748 .77625	.79206 .62622	.75934 .52741	.71596 .45397	.66714 .39746	.61620 .35415	.56628 .32153	.51977 .29732
.70	.24724 .98942	.53256 .94134	.75786 .77300	.76007 .62854	.72378 .53336	.67730 .46394	.62706 .41180	.57678 .37267	.52916 .34355	.48576 .32192
.80	.24682 .98793	.52599 .93420	.72978 .76998	.72915 .63114	.68987 .53977	.64124 .47430	.59047 .42613	.54130 .39057	.49588 .36430	.45515 .34480
.90	.24634 .98645	.51892 .92745	.70310 .76724	.69936 .63399	.65762 .54652	.60760 .48488	.55693 .44030	.50912 .40780	.46579 .38394	.42739 .36622
1.00	.24560 .98498	.51144 .92109	.67771 .76421	.67072 .63708	.62702 .55353	.57622 .49552	.52608 .45419	.47976 .42437	.43839 .40256	.40207 .38638

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 20$$

B	1/A = .10	1/A = .20	1/A = .30	1/A = .40	1/A = .50	1/A = .60	1/A = .70	1/A = .80	1/A = .90	1/A = 1.00
0.00	.18346 1.00000	.30830 1.00000	.67266 1.00000	1.00000 .75402	1.00000 .59637	1.00000 .48445	1.00000 .38895	1.00000 .29807	1.00000 .19950	1.00000 .00000
.10	.18344 .99877	.30807 .99413	.66982 .97728	.94834 .75302	.95124 .59673	.94384 .48562	.93115 .39149	.91073 .30381	.87296 .21625	.79315 .13485
.20	.18339 .99755	.30738 .98828	.66182 .95574	.89828 .75028	.90306 .59779	.88873 .48903	.86503 .39864	.82999 .31846	.77830 .24738	.70888 .19127
.30	.18329 .99632	.30623 .98249	.64989 .93612	.85087 .74645	.85599 .59954	.83556 .49440	.80344 .40924	.76018 .33761	.70602 .27898	.64539 .23481
.40	.18315 .99510	.30467 .97677	.63533 .91868	.80650 .74218	.81047 .60192	.78496 .50134	.74702 .42207	.70001 .35835	.64710 .30850	.59299 .27160
.50	.18297 .99388	.30261 .97114	.61317 .90333	.76514 .73737	.76682 .60489	.73728 .50940	.69571 .43614	.64756 .37924	.59702 .33601	.54793 .30400
.60	.18275 .99267	.30018 .96563	.60212 .88989	.72660 .73413	.72526 .60838	.69266 .51636	.64909 .45077	.60124 .39965	.55334 .36144	.50828 .33319
.70	.18249 .99146	.37736 .96026	.58466 .87814	.69061 .73084	.68590 .61233	.65107 .52779	.60666 .46552	.55987 .41932	.51458 .38515	.47288 .35987
.80	.18220 .99026	.37418 .95503	.56709 .86786	.65694 .72817	.64880 .61666	.61240 .53752	.56795 .48013	.52262 .43815	.47980 .40732	.44097 .38450
.90	.18186 .98906	.37066 .94998	.54960 .85888	.62537 .72613	.61391 .62133	.57650 .54737	.53252 .49443	.48884 .45612	.44833 .42812	.41201 .40739
1.00	.18149 .98787	.36684 .94510	.53234 .85103	.59573 .72471	.58118 .62625	.54317 .55722	.50000 .50834	.45804 .47324	.41969 .44768	.38566 .42876

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

K=SIN 25

B	1/A= .10	1/A= .20	1/A= .30	1/A= .40	1/A= .50	1/A= .60	1/A= .70	1/A= .80	1/A= .90	1/A=1.00
0.00	.14511 1.00000	.30105 1.00000	.48684 1.00000	.78093 1.00000	1.00000 .71094	1.00000 .56048	1.00000 .44425	1.00000 .33797	1.00000 .22514	1.00000 .00000
.10	.14510 .99894	.30089 .99525	.48594 .98631	.76637 .94811	.93498 .70862	.93618 .56127	.92596 .44679	.90658 .34416	.86910 .24370	.78873 .15123
.20	.14505 .99788	.30043 .99052	.48330 .97282	.73616 .90854	.87261 .70620	.87380 .56357	.85486 .45388	.82190 .35988	.77113 .27797	.70194 .21362
.30	.14497 .99682	.29966 .98582	.47900 .95973	.70290 .87913	.81446 .70178	.81408 .56722	.78662 .46431	.74846 .38922	.69590 .31238	.63617 .26163
.40	.14487 .99577	.29859 .98117	.47321 .94720	.67012 .85643	.76096 .69740	.75783 .57198	.72804 .47677	.68501 .40195	.63434 .34421	.50165 .30159
.50	.14473 .99471	.29723 .97659	.46611 .93534	.63864 .83842	.71192 .69366	.70547 .57764	.67309 .49026	.62964 .42355	.58190 .37334	.53465 .33639
.60	.14456 .99366	.29559 .97203	.45792 .92425	.60864 .82389	.66697 .69037	.65712 .58396	.62339 .50411	.58078 .44437	.53611 .40004	.49324 .36741
.70	.14436 .99262	.29368 .96766	.44884 .91396	.58011 .81209	.62570 .68909	.61267 .55076	.57842 .51791	.53726 .46417	.49553 .42462	.45623 .39546
.80	.14414 .99158	.29151 .96334	.43906 .90449	.55301 .80248	.58775 .68830	.57191 .59791	.53766 .53146	.49821 .43291	.45919 .44735	.42302 .42109
.90	.14388 .99054	.28910 .95913	.42874 .89585	.52728 .79470	.55278 .68641	.53456 .60528	.50065 .54462	.46297 .50060	.42642 .46846	.39291 .44468
1.00	.14359 .98951	.28647 .95505	.41805 .88800	.50287 .78844	.52050 .68930	.50032 .61279	.46697 .55734	.43103 .51731	.39673 .48813	.36555 .46652

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+TB)$$

K=SN 30

B	1/A= .10	1/A= .20	1/A= .30	1/A= .40	1/A= .50	1/A= .60	1/A= .70	1/A= .80	1/A= .90	1/A=1.00
0.00	.11965 1.00000	.24581 1.00000	.38806 1.00000	.56807 1.00000	1.00000 1.00000	1.00000 .65846	1.00000 .50937	1.00000 .38306	1.00000 .25341	1.00000 .00000
.10	.11964 .99905	.24569 .99587	.38750 .98908	.56536 .97323	.84299 .88357	.92023 .65720	.91757 .51142	.90057 .39948	.86386 .27375	.78294 .16874
.20	.11960 .99810	.24534 .99175	.38584 .97828	.55760 .94766	.77311 .84033	.84465 .65417	.83874 .51711	.81031 .40562	.76141 .31088	.69286 .23752
.30	.11954 .99715	.24475 .98766	.38312 .96770	.54572 .92417	.71699 .81085	.77537 .65088	.76594 .52540	.73197 .42613	.68236 .34752	.62418 .28925
.40	.11945 .99620	.24394 .98361	.37941 .95743	.53080 .90320	.66823 .78921	.71295 .64844	.70014 .53527	.66441 .44762	.61754 .38080	.56711 .33182
.50	.11934 .99526	.24290 .97961	.37478 .94758	.51389 .88487	.62453 .77294	.65701 .64734	.64130 .54593	.60575 .46856	.56239 .41070	.51790 .36632
.60	.11920 .99431	.24165 .97567	.36934 .93813	.49578 .86905	.58479 .76068	.60690 .64765	.58886 .55691	.55436 .48841	.51443 .43765	.47465 .40038
.70	.11904 .99338	.24018 .97179	.36319 .92934	.47703 .85553	.54839 .75155	.56192 .64923	.54212 .56794	.50898 .50704	.47216 .46211	.43622 .42900
.80	.11885 .99244	.23852 .96801	.35643 .92104	.45822 .84409	.51498 .74489	.52144 .65188	.50336 .57887	.46866 .52450	.43458 .48446	.40162 .45404
.90	.11865 .99151	.23667 .96431	.34917 .91332	.43950 .83447	.48400 .74022	.48489 .65537	.46293 .58962	.43264 .54088	.40096 .50500	.37088 .47839
1.00	.11841 .99059	.23463 .96071	.34150 .90819	.42113 .82844	.45544 .73716	.45178 .65957	.42927 .60014	.40031 .55628	.37074 .52400	.34297 .50000

$$\frac{U/K+IV/K}{-1}$$

$$U+IV=SN(A+IB)$$

$$K=\sin 35$$

B	1/A= .10	1/A= .20	1/A= .30	1/A= .40	1/A= .50	1/A= .60	1/A= .70	1/A= .80	1/A= .90	1/A=1.00
0.00	.10139 1.00000	.20715 1.00000	.32311 1.00000	.45976 1.00000	.64588 1.00000	.81717 1.00000	1.00000 1.00000	1.00000 1.00000	1.00000 1.00000	1.00000 1.00000
.10	.10138 .99913	.20705 .99627	.32270 .99053	.45823 .97922	.63806 .95077	.80977 .79403	.90248 .59181	.89162 .44255	.85675 .30776	.77550 .18600
.20	.10135 .99825	.20677 .99255	.32147 .98114	.45374 .95900	.61781 .90764	.77789 .6269	.84159 .59189	.79347 .45761	.74836 .34717	.68120 .26296
.30	.10130 .99738	.20630 .98885	.31944 .97192	.44660 .93980	.59080 .87258	.70579 .73868	.73077 .59323	.70891 .47624	.66455 .38502	.60899 .31809
.40	.10122 .99651	.20564 .98519	.31666 .96893	.43721 .92199	.56110 .84489	.64504 .72157	.66024 .59621	.63687 .49527	.59807 .41848	.54904 .36246
.50	.10113 .99564	.20479 .98156	.31318 .95425	.42604 .90577	.53089 .82321	.59224 .70902	.59913 .60072	.57526 .51352	.53824 .44783	.49759 .39974
.60	.10102 .99477	.20377 .97799	.30925 .94593	.41355 .89125	.50173 .80634	.54504 .70219	.54600 .60643	.52212 .53067	.48848 .47381	.45272 .43192
.70	.10088 .99391	.20258 .97448	.30435 .93801	.40015 .87842	.47284 .79332	.50416 .69767	.49953 .61304	.47592 .54676	.44511 .49707	.41319 .46024
.80	.10073 .99305	.20123 .97104	.29915 .93054	.38620 .86723	.44581 .74337	.46699 .69553	.45863 .62026	.43542 .56187	.40698 .51813	.37814 .48552
.90	.10055 .99220	.19972 .96768	.29352 .92353	.37197 .85756	.42030 .77592	.43353 .69519	.42240 .62784	.39068 .57614	.37325 .53738	.34693 .50837
1.00	.10035 .99135	.19806 .96441	.28753 .91700	.35769 .81930	.39633 .77048	.40328 .69624	.39013 .63573	.36796 .58965	.34324 .55513	.31903 .52921

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 45$$

B	1/A= .10	1/A= .20	1/A= .30	1/A= .40	1/A= .50	1/A= .60	1/A= .70	1/A= .80	1/A= .90	1/A=1.00
0.00	.07666 1.00000	.15572 1.00000	.24011 1.00000	.33412 1.00000	.44551 1.00000	.59311 1.00000	.89213 1.00000	1.00000 .59311	1.00000 .37150	1.00000 1.00000
.10	.07665 .99923	.15566 .99675	.23984 .99206	.33327 .98390	.44295 .96911	.58357 .93702	.77530 .82463	.85239 .58933	.83307 .39478	.75375 .23443
.20	.07663 .99845	.15545 .99352	.23901 .98419	.33073 .96810	.43555 .93963	.55911 .88322	.68365 .75980	.73027 .58483	.70713 .43317	.64769 .32068
.30	.07659 .99768	.15511 .99030	.23766 .97643	.32663 .95286	.42411 .91267	.52714 .84141	.60980 .72331	.63467 .58478	.61226 .46657	.56708 .37938
.40	.07654 .99691	.15463 .98711	.23579 .96884	.32111 .93840	.40967 .88888	.49286 .81027	.54787 .70186	.55892 .58863	.53772 .49411	.50168 .42358
.50	.07646 .99614	.15402 .98395	.23343 .96148	.31438 .92492	.39324 .86847	.45895 .78755	.49509 .68959	.49740 .59498	.47727 .51745	.44719 .45893
.60	.07638 .99537	.15328 .98084	.23063 .95438	.30666 .91252	.37569 .85135	.42669 .77126	.44960 .68324	.44630 .60284	.42705 .53790	.40104 .48846
.70	.07628 .99461	.15242 .97728	.22742 .94759	.29814 .90128	.35770 .83727	.39657 .75985	.41004 .68085	.40307 .61159	.38457 .55629	.36148 .51396
.80	.07616 .99385	.15143 .97477	.22385 .94113	.28906 .89120	.33974 .82587	.36872 .75213	.37534 .68114	.36594 .62085	.34814 .57315	.32724 .53651
.90	.07602 .99309	.15034 .97183	.21995 .93503	.27958 .88227	.32215 .81681	.34312 .74723	.34471 .68332	.33370 .63036	.31655 .58879	.29738 .55680
1.00	.07588 .99234	.14913 .96896	.21578 .92931	.26887 .87445	.30515 .80975	.31963 .74450	.31749 .68681	.30544 .63996	.28891 .60343	.27115 .57532

$$\frac{U/K+IV/K}{U+IV:SN} \frac{-1}{(A+IR)}$$

$$K=\sin 50$$

θ	$1/A = .10$	$1/A = .20$	$1/A = .30$	$1/A = .40$	$1/A = .50$	$1/A = .60$	$1/A = .70$	$1/A = .80$	$1/A = .90$	$1/A = 1.00$
0.00	.06775 1.00000	.13740 1.00000	.21122 1.00000	.29236 1.00000	.38609 1.00000	.50314 1.00000	.67599 1.00000	1.00000 .73589	1.00000 .43277	1.00000 .00000
.10	.06774 .99926	.13734 .99691	.21098 .99252	.29166 .98509	.38413 .97235	.49722 .94808	.64880 .88765	.80182 .69164	.81246 .45258	.73793 .26311
.20	.06772 .99852	.13716 .99383	.21028 .98509	.28957 .97042	.37843 .94575	.48104 .90130	.59519 .81222	.67530 .65302	.67533 .48278	.62428 .35314
.30	.06769 .99778	.13686 .99077	.20911 .97777	.28617 .95624	.36951 .92110	.45814 .86241	.53977 .76563	.59332 .63465	.57659 .50795	.53566 .41075
.40	.06764 .99704	.13644 .98773	.20751 .97061	.28158 .94275	.35804 .89698	.43190 .83176	.48896 .73690	.51203 .62778	.50177 .52895	.47277 .45245
.50	.06758 .99631	.13591 .98472	.20549 .96365	.27596 .93009	.34476 .87966	.40470 .80841	.44381 .71948	.45466 .52728	.44254 .54736	.41827 .48515
.60	.06750 .99557	.13527 .98176	.20309 .95693	.26948 .91839	.33034 .86317	.37796 .79106	.40404 .70920	.40722 .63044	.39414 .56410	.37292 .51232
.70	.06741 .99484	.13451 .97884	.20033 .95049	.26230 .90771	.31533 .84937	.35242 .77847	.36899 .70388	.36720 .63580	.35365 .57367	.33456 .53579
.80	.06731 .99411	.13365 .97598	.19725 .94436	.25459 .89808	.30017 .83804	.32845 .76962	.33801 .70192	.33291 .64252	.31919 .59431	.30171 .55664
.90	.06719 .99339	.13270 .97318	.19389 .93856	.24650 .88950	.28516 .82689	.30815 .76369	.31051 .70229	.30318 .65006	.28950 .60820	.27328 .57512
1.00	.06706 .99267	.13164 .97044	.19028 .93310	.23819 .88194	.27053 .82164	.28552 .76802	.28600 .70433	.27716 .65809	.26364 .62142	.24848 .59284

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 55$$

B	1/A= .10	1/A= .20	1/A= .30	1/A= .40	1/A= .50	1/A= .60	1/A= .70	1/A= .80	1/A= .90	1/A=1.00
0.00	.06025 1.00000	.12205 1.00000	.18722 1.00000	.25821 1.00000	.33889 1.00000	.43645 1.00000	.56820 1.00000	.81717 1.00000	1.00000 .51795	1.00000 .00000
.10	.06024 .99929	.12200 .99703	.18701 .99206	.25761 .98593	.33730 .97445	.43210 .95406	.55354 .91113	.71113 .78578	.78021 .52294	.71721 .29649
.20	.06022 .99857	.12184 .99407	.18640 .98577	.25584 .97209	.33267 .94979	.41997 .91177	.51856 .84138	.60816 .70948	.63404 .53375	.59537 .38726
.30	.06019 .99786	.12157 .99113	.18533 .97878	.25295 .95867	.32535 .92675	.40219 .87549	.47676 .79320	.52806 .67493	.53547 .54638	.50801 .44112
.40	.06015 .99715	.12121 .98821	.18399 .97193	.24904 .94587	.31586 .90587	.38111 .84596	.43539 .76149	.46446 .65914	.46316 .55955	.44118 .47884
.50	.06009 .99644	.12074 .98532	.18224 .96528	.24423 .93383	.30475 .88745	.35865 .82281	.39711 .74118	.41270 .65306	.40689 .57281	.38795 .50824
.60	.06003 .99573	.12017 .98247	.18014 .95885	.23867 .92266	.29257 .87154	.33608 .80516	.36260 .72863	.36966 .65245	.36135 .58599	.34434 .53278
.70	.05995 .99503	.11950 .97967	.17773 .95268	.23248 .91243	.27977 .85810	.31419 .79206	.33175 .72140	.33324 .65510	.32349 .59895	.30784 .55420
.80	.05986 .99433	.11875 .97692	.17504 .94680	.22582 .90317	.26674 .84693	.29338 .78261	.30423 .71789	.30198 .65979	.29143 .61164	.27683 .57342
.90	.05975 .99363	.11790 .97422	.17210 .94123	.21882 .89488	.25374 .83782	.27385 .77607	.27966 .71000	.27486 .66576	.26388 .62400	.25014 .59099
1.00	.05964 .99293	.11697 .97159	.16895 .93599	.21158 .88754	.24100 .83053	.25587 .77182	.25766 .71798	.25111 .67255	.23997 .63601	.22697 .60723

U/K+IV/K'
-1
U+IV=SN (A+IB)

K=SIN 60

B	1/A= .10	1/A= .20	1/A= .30	1/A= .40	1/A= .50	1/A= .60	1/A= .70	1/A= .80	1/A= .90	1/A=1.00
0.00	.05375 1.00000	.10860 1.00000	.16664 1.00000	.22926 1.00000	.29964 1.00000	.38306 1.00000	.49082 1.00000	.65646 1.00000	1.00000 .65399	1.00000 .00000
.10	.05375 .99931	.10876 .99713	.16646 .99312	.22874 .98655	.29830 .97592	.37962 .95776	.48072 .92282	.61411 .83662	.72918 .60231	.68979 .33497
.20	.05373 .99461	.10862 .99426	.16593 .98629	.22720 .97331	.29441 .95260	.36990 .91851	.45499 .85861	.54030 .74861	.58421 .58091	.56054 .42151
.30	.05371 .99792	.10838 .99141	.16504 .97955	.22470 .96047	.28823 .93073	.35541 .88423	.42204 .81137	.47394 .70481	.49096 .57942	.47273 .46906
.40	.05367 .99723	.10806 .98859	.16381 .97295	.22132 .94819	.28017 .91079	.33791 .85578	.38781 .77076	.41869 .68307	.42354 .58502	.40773 .50193
.50	.05362 .99654	.10764 .98579	.16227 .96653	.21715 .93662	.27068 .89307	.31894 .83305	.35516 .75707	.37280 .67302	.37139 .59367	.35694 .52784
.60	.05356 .99586	.10713 .98303	.16042 .96032	.21231 .92585	.26021 .87766	.29960 .81543	.32516 .74315	.33425 .66962	.32435 .60375	.31501 .54985
.70	.05349 .99517	.10655 .98031	.15830 .95436	.20692 .91597	.24914 .86454	.28063 .80212	.29801 .73670	.30143 .67024	.29448 .61453	.28155 .56938
.80	.05341 .99449	.10587 .97765	.15593 .94868	.20110 .90700	.23779 .85356	.26243 .79237	.27359 .73014	.27317 .67339	.26500 .62559	.25276 .58715
.90	.05331 .99381	.10512 .97504	.15334 .94328	.19496 .89894	.22643 .84454	.24525 .78547	.25167 .72837	.24855 .67816	.23971 .63671	.22801 .60358
1.00	.05321 .99314	.10430 .97249	.15056 .93820	.18861 .89179	.21524 .83726	.22917 .78086	.23197 .72861	.22705 .68399	.21777 .64772	.20658 .61890

$$\frac{U/K+IV/K}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 65$$

B	1/A= .10	1/A= .20	1/A= .30	1/A= .40	1/A= .50	1/A= .60	1/A= .70	1/A= .80	1/A= .90	1/A=1.00
0.00	.04797 1.00000	.09703 1.00000	.14845 1.00000	.20385 1.00000	.26567 1.00000	.33797 1.00000	.42097 1.00000	.56048 1.00000	.86027 1.00000	1.00000 1.00000
.10	.04796 .99932	.09699 .99720	.14829 .99332	.20340 .98701	.26453 .97696	.33514 .96028	.42124 .92971	.53295 .86203	.65832 .67404	.65349 .37773
.20	.04795 .99885	.09687 .99441	.14782 .98868	.20205 .97422	.26119 .95463	.32707 .92310	.40098 .86958	.47796 .77409	.52945 .61965	.52000 .45370
.30	.04792 .99797	.09666 .99163	.14703 .98013	.19983 .96181	.25589 .93361	.32193 .89031	.37405 .82370	.42317 .72617	.44521 .60594	.43463 .49334
.40	.04789 .99730	.09637 .98888	.14595 .97372	.19692 .94992	.24895 .91438	.30009 .86275	.34523 .79102	.37555 .70087	.38400 .60531	.37310 .52124
.50	.04785 .99663	.09600 .98615	.14459 .96748	.19328 .93871	.24074 .89720	.28382 .84046	.31716 .76868	.33518 .68016	.33658 .61021	.32566 .54391
.60	.04779 .99596	.09555 .98346	.14296 .96145	.18904 .92826	.23163 .88220	.26708 .82298	.29099 .75397	.30089 .68281	.29831 .61783	.28752 .56369
.70	.04773 .99529	.09503 .98081	.14108 .95585	.18431 .91864	.22198 .86935	.25052 .80962	.26709 .74475	.27152 .66195	.26657 .62686	.25599 .58161
.80	.04766 .99462	.09443 .97821	.13899 .95011	.17919 .90990	.21204 .85854	.23455 .79971	.24544 .73950	.24612 .68397	.23973 .63663	.22942 .59816
.90	.04758 .99396	.09376 .97567	.13670 .94486	.17379 .90203	.20206 .84962	.21939 .79260	.22592 .73711	.22399 .68784	.21672 .64676	.20671 .61364
1.00	.04748 .99330	.09303 .97318	.13424 .93991	.16820 .89503	.19219 .84238	.20514 .78776	.20832 .73682	.20456 .69295	.19677 .65699	.18709 .62822

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 70$$

B	1/A= .10	1/A= .20	1/A= .30	1/A= .40	1/A= .50	1/A= .60	1/A= .70	1/A= .80	1/A= .90	1/A= 1.00
0.00	.04264 1.00000	.08622 1.00000	.13180 1.00000	.18076 1.00000	.23506 1.00000	.29807 1.00000	.37605 1.00000	.48445 1.00000	.62787 1.00000	1.00000 .00000
.10	.04264 .99934	.08618 .99726	.13166 .99347	.18036 .98736	.23410 .97772	.29568 .96200	.36982 .93410	.46449 .87604	.58022 .72336	.60649 .42162
.20	.04262 .99867	.08607 .99452	.13124 .98698	.17919 .97490	.23122 .95609	.28886 .92629	.35324 .87685	.42137 .79071	.47333 .64855	.47452 .48159
.30	.04260 .99801	.08589 .99180	.13055 .98058	.17728 .96280	.22663 .93570	.27852 .89459	.33073 .83222	.37568 .74119	.39938 .62609	.39434 .51320
.40	.04257 .99735	.08563 .98910	.12960 .97431	.17469 .95121	.22061 .91699	.26580 .86774	.30619 .79974	.33468 .71385	.34484 .62083	.33755 .53668
.50	.04253 .99669	.08530 .98643	.12839 .96820	.17149 .94026	.21348 .90023	.25175 .84584	.28194 .77713	.29933 .69943	.30234 .62292	.29410 .55661
.60	.04249 .99603	.08491 .98379	.12696 .96230	.16778 .93005	.20554 .88554	.23720 .82851	.25911 .76196	.26903 .69273	.26794 .62866	.25930 .57455
.70	.04243 .99538	.08444 .98120	.12530 .95662	.16362 .92064	.19709 .87291	.22273 .81517	.23810 .75225	.24292 .69084	.23938 .63637	.23062 .59117
.80	.04237 .99472	.08391 .97865	.12345 .95120	.15913 .91207	.18838 .86225	.20871 .80519	.21898 .74653	.22028 .69203	.21521 .64515	.20649 .60676
.90	.04229 .99407	.08332 .97615	.12143 .94606	.15437 .90435	.17961 .85342	.19535 .79795	.20167 .74373	.20050 .69525	.19443 .65452	.18590 .62149
1.00	.04221 .99343	.08267 .97371	.11926 .94120	.14946 .89747	.17092 .84623	.18273 .79296	.18602 .74306	.18311 .69982	.17651 .66416	.16813 .63547

$$\frac{U/K+IV/K}{U+IV=SN} \frac{-1}{(A+IB)}$$

$$K=\sin 75$$

θ	$1/A=.10$	$1/A=.20$	$1/A=.30$	$1/A=.40$	$1/A=.50$	$1/A=.60$	$1/A=.70$	$1/A=.80$	$1/A=.90$	$1/A=1.00$
0.00	.03753 1.00000	.07586 1.00000	.11590 1.00000	.15880 1.00000	.20624 1.00000	.26091 1.00000	.32767 1.00000	.41867 1.00000	.57591 1.00000	1.00000 .00000
.10	.03753 .99935	.07587 .99730	.11578 .99358	.15846 .98761	.20539 .97825	.25808 .96315	.32273 .93697	.40334 .88442	.50438 .75302	.54829 .45123
.20	.03752 .99869	.07573 .99460	.11541 .98720	.15744 .97539	.20291 .95713	.25308 .92851	.30892 .88172	.36843 .80158	.41705 .66870	.42462 .50368
.30	.03750 .99804	.07557 .99192	.11480 .98090	.15578 .96332	.19895 .93719	.24425 .89759	.28994 .83605	.33008 .75153	.35326 .64064	.35179 .52841
.40	.03747 .99739	.07534 .98926	.11397 .97474	.15352 .95215	.19374 .91886	.23333 .87126	.26898 .80584	.29450 .72304	.30545 .63219	.30066 .54835
.50	.03744 .99674	.07506 .98663	.11292 .96873	.15074 .94139	.18756 .90240	.22121 .84966	.24809 .79313	.26419 .70754	.26795 .63228	.26158 .56616
.60	.03739 .99609	.07471 .98403	.11166 .96292	.14750 .93135	.18067 .88794	.20861 .83248	.22827 .76770	.23768 .69995	.23750 .63667	.23053 .58270
.70	.03734 .99544	.07430 .98148	.11021 .95734	.14387 .92210	.17332 .87548	.19603 .81917	.20994 .75769	.21474 .69733	.21217 .64341	.20489 .59832
.80	.03729 .99480	.07384 .97897	.10859 .95200	.13995 .91366	.16573 .86494	.18380 .80915	.19320 .75166	.19478 .69795	.19072 .65148	.18335 .61318
.90	.03722 .99416	.07332 .97651	.10682 .94694	.13579 .90605	.15807 .85618	.17212 .80185	.17800 .74857	.17731 .70071	.17231 .66029	.16497 .62735
1.00	.03715 .99352	.07275 .97411	.10492 .94215	.13148 .89926	.15047 .84903	.16109 .79677	.16424 .74764	.16194 .70490	.15635 .66948	.14913 .64089

U/K+IV/K'
-1
U+IV=SN (A+IB)

K=SIN 80

8	1/A= .10	1/A= .20	1/A= .30	1/A= .40	1/A= .50	1/A= .60	1/A= .70	1/A= .80	1/A= .90	1/A=1.00
0.00	.03231 1.00000	.06530 1.00000	.09972 1.00000	.13655 1.00000	.17718 1.00000	.22382 1.00000	.28056 1.00000	.35665 1.00000	.48273 1.00000	1.00000 .00000
.10	.03231 .99935	.06527 .99733	.09961 .99365	.13626 .98777	.17646 .97861	.22211 .96396	.27631 .93879	.34422 .88945	.42995 .77012	.47875 .49146
.20	.03230 .99870	.06518 .99466	.09930 .98735	.13539 .97572	.17435 .95783	.21722 .92996	.26483 .88485	.31573 .80843	.35887 .68178	.36912 .51937
.30	.03228 .99806	.06505 .99201	.09878 .98113	.13397 .96401	.17098 .93819	.20377 .89956	.24893 .84186	.28375 .75828	.30493 .65041	.30541 .53905
.40	.03226 .99741	.06485 .98938	.09807 .97503	.13204 .95278	.16655 .92011	.20052 .87360	.23126 .80988	.25401 .72916	.26399 .63991	.26083 .55647
.50	.03223 .99677	.06460 .98677	.09716 .96909	.12966 .94216	.16128 .90386	.19023 .85222	.21353 .78714	.22783 .71300	.23169 .63868	.22689 .57279
.60	.03219 .99613	.06430 .98420	.09608 .96335	.12688 .93224	.15540 .88957	.17950 .83514	.19663 .77157	.20511 .70484	.20540 .64215	.19979 .58835
.70	.03215 .99549	.06395 .98167	.09484 .95783	.12378 .92309	.14912 .87723	.16876 .82187	.18095 .76137	.18539 .70177	.18350 .64825	.17750 .60329
.80	.03210 .99485	.06350 .97519	.09345 .95255	.12042 .91474	.14263 .86677	.15830 .81184	.16659 .75515	.16820 .70201	.16494 .65584	.15878 .61764
.90	.03205 .99422	.06311 .97676	.09193 .94754	.11686 .90720	.13607 .85806	.14829 .80450	.15353 .75187	.15314 .70445	.14906 .66427	.14282 .63142
1.00	.03199 .99356	.06262 .97438	.09030 .94281	.11316 90048	.12956 .85094	.13882 .79936	.14168 .75078	.13986 .70839	.13518 .67316	.12506 .64465

$$\frac{U/K+IV/K'}{U+IV=SN} \frac{-1}{(A+IB)}$$

$$K=\sin 85$$

G	1/A = .10	1/A = .20	1/A = .30	1/A = .40	1/A = .50	1/A = .60	1/A = .70	1/A = .80	1/A = .90	1/A = 1.00
0.00	.02629 1.00000	.05311 1.00000	.08110 1.00000	.11101 1.00000	.14396 1.00000	.18171 1.00000	.22746 1.00000	.28838 1.00000	.38734 1.00000	1.00000 .00000
.10	.02628 .99336	.05309 .99734	.08101 .99370	.11077 .98787	.14338 .97881	.18034 .96440	.22408 .93981	.27866 .89216	.34767 .77503	.39191 .50981
.20	.02627 .99871	.05302 .99469	.08076 .98743	.11007 .97591	.14168 .95823	.17641 .93079	.21492 .88661	.25616 .81223	.29175 .68912	.30180 .52866
.30	.02626 .99807	.05291 .99206	.08034 .98126	.10892 .96429	.13896 .93876	.17071 .90069	.20219 .84402	.23062 .76210	.24838 .65601	.24960 .54532
.40	.02624 .99743	.05275 .98944	.07975 .97520	.10736 .95315	.13530 .92084	.16296 .87494	.18798 .81218	.20668 .73267	.21520 .64438	.21310 .56126
.50	.02622 .99679	.05255 .98685	.07902 .96930	.10543 .94260	.13112 .90471	.15466 .85369	.17368 .78944	.18551 .71616	.18894 .64241	.18532 .57669
.60	.02619 .99615	.05231 .98430	.07814 .96360	.10318 .93275	.12636 .89050	.14598 .83668	.16001 .77380	.16708 .70769	.16753 .64537	.16315 .59168
.70	.02616 .99551	.05202 .98179	.07714 .95811	.10066 .92366	.12127 .87824	.13729 .82344	.14730 .76350	.15106 .70435	.14967 .65109	.14492 .60620
.80	.02612 .99486	.05170 .97932	.07601 .95287	.09794 .91536	.11601 .86783	.12880 .81340	.13564 .75717	.13787 .70437	.13453 .65839	.12960 .62025
.90	.02607 .99425	.05134 .97690	.07477 .94789	.09505 .90787	.11069 .85915	.12068 .80604	.12503 .75380	.12480 .70664	.12152 .66660	.11655 .63381
1.00	.02602 .99362	.05094 .97454	.07345 .94319	.09265 .90119	.10541 .85205	.11299 .80007	.11540 .75261	.11399 .71043	.11024 .67532	.10531 .64685

$$\frac{U/K+IV/K}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 66$$

	1/A= .10	1/A= .20	1/A= .30	1/A= .40	1/A= .50	1/A= .60	1/A= .70	1/A= .80	1/A= .90	1/A=1.00
0.00	.02482 1.00000	.05015 1.00000	.07657 1.00000	.10480 1.00000	.13591 1.00000	.17152 1.00000	.21468 1.00000	.27208 1.00000	.36515 1.00000	1.00000 1.00000
.10	.02482 .99936	.05013 .99735	.07648 .99370	.10458 .98788	.13536 .97884	.17023 .96445	.21149 .93992	.26295 .89247	.32802 .78004	.37026 .51201
.20	.02481 .99871	.05006 .99470	.07624 .98745	.10392 .97594	.13375 .95827	.16653 .93084	.20286 .88681	.24178 .81267	.27543 .68997	.28511 .52976
.30	.02480 .99807	.04995 .99205	.07585 .98127	.10283 .96432	.13118 .93883	.16087 .90083	.19087 .84428	.21772 .76255	.23455 .65667	.23578 .54607
.40	.02478 .99743	.04981 .98945	.07530 .97522	.10136 .95319	.12781 .92192	.15384 .87509	.17747 .81245	.19514 .73308	.20323 .64491	.20133 .56182
.50	.02476 .99679	.04962 .98836	.07461 .96933	.09953 .94266	.12378 .90481	.14601 .85386	.16397 .78971	.17517 .71653	.17844 .64285	.17505 .57716
.60	.02473 .99615	.04939 .98431	.07378 .96363	.09741 .93282	.11929 .89052	.13782 .83686	.15108 .77406	.15777 .70802	.15822 .64575	.15411 .59207
.70	.02469 .99552	.04912 .98180	.07283 .95815	.09504 .92373	.11450 .87836	.12962 .82362	.13908 .76375	.14265 .70465	.14136 .65142	.13669 .60355
.80	.02466 .99488	.04881 .97933	.07176 .95291	.09246 .91544	.10953 .86795	.12162 .81359	.12808 .75741	.12944 .70465	.12706 .65869	.12241 .62057
.90	.02462 .99425	.04847 .97692	.07060 .94793	.08974 .90795	.10451 .85928	.11395 .80622	.11806 .75493	.11786 .70690	.11477 .66688	.11009 .63409
1.00	.02457 .99363	.04809 .97456	.06934 .94323	.08691 .90127	.09952 .85218	.10669 .80105	.10897 .75283	.10765 .71067	.10412 .67558	.09946 .64712

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A-IB)$$

$$K=\sin \theta$$

g	1/A= .10	1/A= .20	1/A= .30	1/A= .40	1/A= .50	1/A= .60	1/A= .70	1/A= .80	1/A= .90	1/A= 1.00
0.00	.02316 1.00000	.04679 1.00000	.07144 1.00000	.09779 1.00000	.12630 1.00000	.16002 1.00000	.20026 1.00000	.25374 1.00000	.34031 1.00000	1.00000 .00000
.10	.02316 .99936	.04677 .99735	.07137 .99371	.09752 .98769	.12629 .97866	.15881 .96449	.19729 .94002	.24525 .89271	.30591 .78082	.34565 .51371
.20	.02315 .99871	.04671 .99476	.07114 .98745	.09696 .97595	.12479 .95831	.15536 .93096	.18925 .88697	.22555 .81301	.25690 .69063	.26615 .53062
.30	.02314 .99807	.04661 .99207	.07077 .98128	.09595 .96435	.12240 .93888	.15009 .90093	.17807 .84447	.20314 .76289	.21888 .55718	.22010 .54865
.40	.02312 .99743	.04647 .98946	.07026 .97524	.09457 .95323	.11925 .92099	.14354 .87522	.16559 .81266	.18209 .73340	.18967 .64532	.18790 .56227
.50	.02310 .99679	.04630 .98687	.06961 .96935	.09287 .94270	.11550 .90469	.13623 .85399	.15300 .78992	.16346 .71682	.16654 .64319	.16340 .57752
.60	.02307 .99615	.04608 .98432	.06884 .96365	.09089 .93286	.11131 .89070	.12860 .83700	.14097 .77427	.14724 .70828	.14767 .64605	.14385 .59238
.70	.02304 .99552	.04583 .98181	.06795 .95817	.08868 .92378	.10684 .87845	.12095 .82377	.12978 .76395	.13312 .70489	.13193 .65169	.12777 .60682
.80	.02301 .99489	.04555 .97934	.06696 .95294	.08628 .91550	.10220 .86805	.11348 .81373	.11952 .75760	.12080 .70487	.11859 .65893	.11426 .62081
.90	.02297 .99426	.04523 .97693	.06587 .94796	.08373 .90802	.09752 .85938	.10633 .80637	.11017 .75420	.10999 .70711	.10712 .66710	.10275 .63432
1.00	.02292 .99363	.04487 .97457	.06470 .94327	.08109 .90133	.09287 .85229	.09956 .80119	.10169 .75300	.10046 .71086	.09717 .67578	.09283 .64732

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN(A+7B)$$

$$K=\sin 80$$

B	1/A= .10	1/A= .20	1/A= .30	1/A= .40	1/A= .50	1/A= .60	1/A= .70	1/A= .80	1/A= .90	1/A=1.00
0.00	.02117 1.00000	.04277 1.00000	.06530 1.00000	.08338 1.00000	.11590 1.00000	.14625 1.00000	.18301 1.00000	.23186 1.00000	.31082 1.00000	1.00000 .00000
.10	.02117 .99936	.04275 .99735	.06523 .99371	.08338 .98790	.11543 .97687	.14515 .96452	.18030 .94008	.22412 .89208	.27952 .78137	.31607 .51693
.20	.02116 .99871	.04270 .99570	.06503 .98746	.08663 .97597	.11406 .95834	.14200 .93101	.17297 .89700	.20614 .81325	.23490 .69111	.24336 .53124
.30	.02115 .99807	.04261 .99207	.06469 .98129	.08770 .96437	.11188 .93632	.13719 .90100	.16276 .84461	.18567 .76314	.20009 .65755	.20125 .54206
.40	.02113 .99743	.04248 .98946	.06422 .97525	.08644 .95325	.10900 .92104	.13120 .87530	.15135 .81281	.16645 .73363	.17340 .64562	.17181 .56258
.50	.02111 .99679	.04232 .98688	.06363 .96936	.08489 .94273	.10557 .90494	.12453 .85409	.13986 .79007	.14943 .71702	.15226 .64343	.14941 .57777
.60	.02109 .99615	.04212 .98433	.06293 .96367	.08308 .93290	.10175 .89076	.11755 .83710	.12887 .77441	.13460 .70847	.13501 .64626	.13153 .59260
.70	.02106 .99552	.04189 .98182	.06212 .95819	.08106 .92382	.09766 .87851	.11056 .82387	.11864 .76409	.12170 .70506	.12062 .65187	.11682 .60701
.80	.02103 .99489	.04163 .97935	.06121 .95296	.07986 .91554	.09342 .86812	.10374 .81383	.10926 .75773	.11044 .70503	.10842 .65909	.10447 .62098
.90	.02100 .99426	.04134 .97594	.06021 .94799	.07654 .90806	.08914 .85945	.09723 .80647	.10072 .75433	.10056 .70725	.09793 .66725	.09394 .63447
1.00	.02096 .99363	.04102 .97458	.05915 .94329	.07412 .90136	.08489 .85236	.09101 .80129	.09296 .75312	.09185 .71100	.08884 .67592	.08488 .64747

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 89$$

B	1/A= .10	1/A= .20	1/A= .30	1/A= .40	1/A= .50	1/A= .60	1/A= .70	1/A= .80	1/A= .90	1/A=1.00
0.00	.01046 1.00000	.03731 1.00000	.05596 1.00000	.07796 1.00000	.10109 1.00000	.12756 1.00000	.15961 1.00000	.20219 1.00000	.27097 1.00000	1.00000 1.00000
.10	.01846 .99936	.03729 .99735	.05690 .99371	.07780 .98790	.10062 .97888	.12660 .95453	.15725 .94012	.19545 .89298	.24375 .78170	.27574 .51566
.20	.01946 .99871	.03724 .99470	.05672 .98746	.07730 .97597	.09949 .95835	.12385 .93104	.15086 .88715	.17978 .81340	.20488 .69139	.21231 .53160
.30	.01845 .99807	.03716 .99207	.05642 .98130	.07649 .96438	.09758 .93894	.11965 .90105	.14196 .84463	.15195 .76329	.17454 .65777	.17557 .54731
.40	.01843 .99743	.03705 .98946	.05602 .97526	.07540 .95326	.09507 .92106	.11443 .87535	.13201 .81290	.14519 .73377	.15126 .64579	.14988 .56277
.50	.01842 .99679	.03691 .98680	.05550 .96937	.07404 .94275	.09208 .90497	.10261 .85415	.12199 .77450	.13034 .71715	.13282 .64358	.13034 .57793
.60	.01840 .99616	.03674 .98423	.05489 .96368	.07247 .93202	.08874 .89030	.10253 .83716	.11240 .77450	.11741 .70858	.11777 .64639	.11474 .59273
.70	.01837 .99552	.03654 .98182	.05418 .95820	.07070 .92384	.06518 .87855	.09643 .82393	.10349 .76417	.10616 .70516	.10522 .65198	.10191 .60713
.80	.01834 .99489	.03631 .97936	.05339 .95297	.06879 .91556	.08149 .86216	.09043 .81390	.09531 .75781	.09634 .70512	.09458 .65920	.09113 .62108
.90	.01831 .99425	.03606 .97694	.05252 .94800	.06676 .90809	.07775 .85950	.08478 .80653	.08785 .75441	.08772 .70734	.08543 .65734	.08195 .63457
1.00	.01829 .99363	.03578 .97459	.05159 .94331	.05465 .90141	.07404 .85240	.07938 .80135	.08109 .75319	.08012 .71108	.07750 .67601	.07404 .64755

U/K+IV/K'
-1
U+IV=SN (A+IB)

K=SN F

I/R	1/A= .01	1/A= .02	1/A= .03	1/A= .04	1/A= .05	1/A= .05	1/A= .07	1/A= .08	1/A= .09	1/A= .10
.01	.03641 .98501	.02905 .97605	.02176 .97308	.01706 .97186	.01334 .97126	.0117 .97092	.01014 .97071	.00892 .97058	.00795 .97048	.00717 .97041
.02	.05934 .98798	.07258 .96993	.06657 .95849	.05743 .95216	.04935 .94855	.0428 .94636	.03709 .94495	.03354 .94359	.03017 .94332	.02738 .94292
.03	.06569 .99097	.10072 .97205	.10824 .95465	.10290 .94222	.09310 .93333	.08452 .92840	.07616 .92462	.06892 .92195	.06273 .92002	.05744 .91858
.04	.06473 .99291	.11680 .97567	.13912 .95603	.14712 .93911	.13779 .92620	.12897 .9167	.11914 .90990	.10980 .90486	.10127 .90109	.09355 .89822
.05	.07023 .99421	.12412 .97896	.16058 .95923	.17339 .93480	.17679 .92324	.1711 .91011	.16216 .90000	.15216 .89226	.14223 .88630	.13287 .88166
.06	.07107 .99511	.13185 .98164	.17543 .96277	.20735 .94230	.20992 .92324	.20923 .90702	.20275 .89385	.19347 .88337	.18317 .87507	.17280 .86348
.07	.07159 .99576	.13559 .98382	.18588 .96612	.21348 .94554	.23718 .92435	.24254 .90632	.23979 .89046	.23237 .87739	.22211 .86677	.21195 .85817
.08	.07193 .99629	.13711 .98557	.19340 .96911	.23418 .94994	.25950 .92717	.27126 .9071	.27279 .88904	.26824 .87362	.25978 .86078	.24944 .85020
.09	.07217 .99669	.13991 .98701	.19894 .97172	.24559 .95225	.27776 .93062	.29587 .90891	.30247 .88900	.30035 .87149	.29433 .85659	.28481 .84411
.10	.07234 .99702	.14123 .98813	.20312 .97399	.25454 .95534	.29276 .93371	.31693 .91131	.32855 .88991	.33059 .87056	.32619 .85378	.31787 .84351

$$\frac{U/K + IV/K}{-1}$$

$$I + IV = SN (A + IB)$$

$$K = \sin 10$$

1/B	1/A = .01	1/A = .02	1/A = .03	1/A = .04	1/A = .05	1/A = .05	1/A = .07	1/A = .08	1/A = .09	1/A = .10
.01	.01819 .99087	.01454 .98539	.01090 .98057	.00755 .97582	.00439 .97109	.00183 .96636	.00059 .96163	.00447 .95690	.00399 .95217	.00360 .94744
.02	.02311 .99259	.01834 .98172	.01349 .97470	.00899 .96779	.00437 .96304	.00171 .95831	.00111 .95358	.01702 .94885	.01532 .94412	.01391 .93939
.03	.03275 .99451	.02036 .98310	.01443 .97254	.00812 .96489	.00430 .95971	.00327 .95621	.00312 .95379	.03549 .94906	.03236 .94433	.02967 .93960
.04	.03426 .99570	.02823 .98533	.02075 .97357	.01243 .96331	.00642 .95532	.00642 .94935	.06183 .94494	.05729 .94165	.05307 .93916	.04324 .93725
.05	.03500 .99648	.02678 .98734	.02023 .97565	.01445 .96408	.00810 .95403	.00810 .94585	.08470 .93935	.08020 .93427	.07553 .93029	.07098 .92714
.06	.03542 .99703	.02557 .98898	.01739 .97789	.01059 .96591	.00576 .95458	.00801 .94467	.10618 .93634	.10263 .92951	.09824 .92394	.09354 .91941
.07	.03567 .99744	.02737 .99030	.02236 .97996	.01371 .96809	.00802 .95614	.02471 .94501	.12550 .93522	.12364 .92681	.12020 .91972	.11590 .91379
.08	.03594 .99775	.02860 .99135	.02591 .98178	.01658 .97031	.01161 .95817	.13882 .94633	.14246 .93541	.14276 .92569	.14080 .91722	.13740 .90995
.09	.03596 .99799	.02846 .99222	.02850 .98336	.02183 .97240	.01395 .96036	.15054 .94815	.15713 .93646	.15986 .92569	.15974 .91605	.15763 .90755
.10	.03504 .99813	.02710 .99293	.02045 .98473	.01289 .97432	.00582 .96254	.16025 .95022	.16972 .93805	.17498 .92650	.17693 .91567	.17639 .90630

U/K+IV/X'
-1
U+IV=SN (A+IB)

K=SIN 15

1/B	1/A= .01	1/A= .02	1/A= .03	1/A= .04	1/A= .05	1/A= .06	1/A= .07	1/A= .08	1/A= .09	1/A= .10
.01	.01209 .99302	.00967 .98883	.00725 .98744	.00568 .98687	.00465 .98658	.00392 .98642	.00338 .98632	.00297 .98626	.00265 .98622	.00239 .98618
.02	.01934 .99441	.02416 .98603	.02229 .98067	.01930 .97767	.01664 .97594	.01447 .97489	.01274 .97421	.01135 .97375	.01021 .97342	.00927 .97318
.03	.02176 .99501	.03347 .98710	.03622 .97904	.03473 .97318	.03189 .96921	.02869 .96651	.02613 .96465	.02372 .96333	.02164 .96236	.01985 .96164
.04	.02276 .99671	.03869 .98861	.04639 .97985	.04825 .97202	.04700 .96591	.04440 .96132	.04139 .95791	.03839 .95537	.03559 .95343	.03305 .95195
.05	.02325 .99731	.04170 .99035	.05332 .98146	.05888 .97266	.06024 .96499	.05913 .95871	.05676 .95372	.05384 .94979	.05079 .94669	.04719 .94423
.06	.02353 .99773	.04354 .99160	.05804 .98318	.06690 .97410	.07116 .96549	.07218 .95793	.07116 .95154	.06896 .94626	.06617 .94194	.06313 .93840
.07	.02370 .99804	.04473 .99261	.06132 .98477	.07290 .97579	.07991 .96675	.08329 .95832	.08406 .95083	.08308 .94437	.08102 .93838	.07834 .93426
.08	.02381 .99828	.04554 .99341	.06365 .98616	.07741 .97750	.08687 .96835	.09258 .95942	.09532 .95113	.09587 .94370	.09490 .93718	.09293 .93154
.09	.02389 .99847	.04611 .99407	.06536 .98737	.08085 .97911	.09239 .97006	.10026 .96089	.10499 .95208	.10723 .94391	.10759 .93653	.10661 .92997
.10	.02394 .99862	.04653 .99462	.06664 .98841	.08350 .98057	.09680 .97175	.10660 .96254	.11324 .95342	.11721 .94472	.11904 .93666	.11923 .92931

U/K+IV/K'
-1
U+IV=SN (A+IB)

K=SIN 20

1/B	1/A= .01	1/A= .02	1/A= .03	1/A= .04	1/A= .05	1/A= .06	1/A= .07	1/A= .08	1/A= .09	1/A= .10
.01	.00902 .99416	.00722 .99066	.00541 .98949	.00424 .98901	.00347 .98878	.00293 .98864	.00253 .98856	.00222 .98851	.00198 .98847	.00179 .98844
.02	.01444 .99533	.01804 .98832	.01665 .98383	.01442 .98132	.01243 .97988	.01081 .97899	.00952 .97842	.00848 .97804	.00763 .97776	.00693 .97756
.03	.01624 .99650	.02499 .98922	.02705 .98248	.02595 .97758	.02384 .97425	.02160 .97199	.01955 .97043	.01774 .96932	.01619 .96850	.01485 .96790
.04	.01699 .99725	.02888 .99065	.03464 .98317	.03505 .97662	.03514 .97150	.03322 .96766	.03098 .96420	.02875 .96266	.02666 .96103	.02476 .95978
.05	.01736 .99775	.03112 .99194	.03981 .98452	.04398 .97717	.04503 .97076	.04424 .96550	.04250 .96131	.04034 .95801	.03807 .95541	.03584 .95333
.06	.01756 .99811	.03250 .99299	.04332 .98596	.04996 .97838	.05318 .97120	.05399 .96488	.05328 .95953	.05168 .95510	.04963 .95147	.04738 .94849
.07	.01769 .99836	.03339 .99382	.04576 .98728	.05442 .97981	.05970 .97227	.06228 .96524	.06292 .95898	.06226 .95357	.06078 .94892	.05883 .94507
.08	.01777 .99856	.03399 .99450	.04750 .98845	.05778 .98124	.06487 .97363	.06919 .96619	.07132 .95928	.07182 .95307	.07119 .94761	.06980 .94286
.09	.01783 .99872	.03441 .99505	.04877 .98946	.06033 .98258	.06897 .97506	.07498 .96744	.07852 .96011	.08030 .95330	.08068 .94713	.08006 .94163
.10	.01787 .99884	.03473 .99550	.04972 .99033	.06230 .98381	.07224 .97649	.07960 .96884	.08464 .96127	.08772 .95404	.08922 .94731	.08951 .94117

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

K=SIN 25

1/B	1/A= .01	1/A= .02	1/A= .03	1/A= .04	1/A= .05	1/A= .06	1/A= .07	1/A= .08	1/A= .09	1/A= .10
.01	.00717 .99488	.00574 .99180	.00430 .99078	.00338 .99035	.00276 .99015	.00233 .99003	.00201 .98996	.00177 .98991	.00157 .98988	.00142 .98985
.02	.01148 .99590	.01435 .98975	.01324 .98581	.01147 .98360	.00985 .98233	.00860 .98156	.00757 .98105	.00674 .98071	.00607 .98047	.00551 .98030
.03	.01292 .99692	.01907 .99053	.02151 .98462	.02064 .98032	.01896 .97739	.01719 .97541	.01556 .97403	.01412 .97306	.01288 .97234	.01182 .97181
.04	.01351 .99759	.02296 .99179	.02754 .98523	.02867 .97948	.02796 .97499	.02643 .97161	.02466 .96910	.02249 .96721	.02123 .96578	.01972 .96468
.05	.01380 .99803	.02474 .99293	.03165 .98642	.03498 .97997	.03582 .97434	.03521 .96973	.03383 .96605	.03213 .96314	.03033 .96085	.02856 .95902
.06	.01396 .99834	.02583 .99384	.03444 .98768	.03973 .98104	.04230 .97474	.04296 .96919	.04241 .96450	.04116 .96160	.03954 .95740	.03777 .95478
.07	.01406 .99856	.02654 .99458	.03638 .98885	.04327 .98229	.04748 .97569	.04955 .96953	.05009 .96403	.04843 .95928	.04690 .95523	.04690 .95180
.08	.01413 .99874	.02702 .99517	.03776 .98987	.04593 .98355	.05158 .97688	.05504 .97037	.05676 .96451	.05719 .95886	.05672 .95406	.05565 .94989
.09	.01418 .99887	.02736 .99565	.03876 .99075	.04795 .98473	.05483 .97815	.05957 .97148	.06248 .96506	.06393 .95909	.06428 .95368	.06383 .94884
.10	.01421 .99898	.02760 .99605	.03952 .99152	.04951 .98581	.05742 .97940	.06229 .97272	.06733 .96609	.06942 .95976	.07107 .95366	.07135 .94848

$$\frac{U/K+IV/K}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 30$$

1/0	1/A= .01	1/A= .02	1/A= .03	1/A= .04	1/A= .05	1/A= .06	1/A= .07	1/A= .08	1/A= .09	1/A= .10
.01	.00593 .99536	.00474 .99258	.00356 .99165	.00279 .99127	.00228 .99108	.00192 .99098	.00166 .99091	.00146 .99087	.00130 .99084	.00117 .99082
.02	.00949 .99629	.01186 .99072	.01095 .98716	.00949 .98516	.00818 .98401	.00711 .98331	.00626 .98286	.00558 .98255	.00502 .98233	.00456 .98217
.03	.01068 .99722	.01643 .99144	.01779 .98608	.01707 .98219	.01569 .97954	.01422 .97774	.01287 .97650	.01168 .97562	.01066 .97497	.00978 .97449
.04	.01117 .99782	.01898 .99258	.02277 .98664	.02371 .98144	.02312 .97737	.02187 .97431	.02040 .97204	.01894 .97033	.01757 .96903	.01632 .96804
.05	.01141 .99822	.02046 .99360	.02617 .98771	.02892 .98188	.02963 .97679	.02913 .97261	.02799 .96928	.02659 .96665	.02510 .96457	.02364 .96292
.06	.01154 .99850	.02136 .99443	.02848 .98886	.03285 .98285	.03498 .97716	.03554 .97214	.03509 .96788	.03407 .96436	.03273 .96146	.03127 .95908
.07	.01163 .99870	.02154 .99510	.03008 .98991	.03578 .98399	.03926 .97802	.04099 .97244	.04114 .96747	.04104 .96317	.04009 .95950	.03884 .95639
.08	.01168 .99886	.02234 .99563	.03121 .99084	.03797 .98513	.04265 .97910	.04552 .97321	.04696 .96773	.04733 .96280	.04696 .95846	.04608 .95468
.09	.01172 .99898	.02262 .99607	.03205 .99164	.03964 .98620	.04533 .98025	.04926 .97422	.05168 .96882	.05290 .96302	.05321 .95813	.05285 .95375
.10	.01175 .99908	.02282 .99643	.03267 .99233	.04093 .98717	.04747 .98138	.05233 .97535	.05569 .96936	.05777 .96364	.05882 .95831	.05907 .95344

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

K=SIN 35

1/5	1/A= .01	1/A= .02	1/A= .03	1/A= .04	1/A= .05	1/A= .06	1/A= .07	1/A= .08	1/A= .09	1/A= .10
.01	.00504 .99572	.00403 .99315	.00302 .99229	.00237 .99194	.00194 .99176	.00163 .99166	.00141 .99160	.00124 .99156	.00111 .99154	.00100 .99152
.02	.00806 .99657	.01007 .99143	.00929 .99814	.00805 .99829	.00694 .99523	.00604 .99458	.00532 .99416	.00474 .99387	.00426 .99367	.00387 .99353
.03	.00906 .99743	.01394 .99209	.01510 .99714	.01449 .99355	.01332 .99110	.01207 .99944	.01093 .99829	.00992 .99747	.00905 .99687	.00830 .99643
.04	.00948 .99792	.01611 .99314	.01933 .99765	.02013 .99885	.01963 .99909	.01857 .99627	.01732 .99416	.01608 .99259	.01492 .99139	.01366 .99047
.05	.00968 .99835	.01736 .99409	.02221 .99865	.02455 .99327	.02515 .99856	.02473 .99470	.02377 .99162	.02258 .99919	.02132 .99726	.02008 .99574
.06	.00980 .99861	.01813 .99486	.02417 .99871	.02788 .99416	.02970 .99890	.03017 .99426	.02980 .99033	.02893 .99707	.02780 .99539	.02657 .99419
.07	.00987 .99880	.01862 .99547	.02553 .99068	.03037 .99521	.03333 .99970	.03480 .99455	.03519 .99996	.03485 .99598	.03406 .99259	.03299 .99972
.08	.00992 .99895	.01896 .99596	.02649 .99154	.03323 .99626	.03620 .99070	.03864 .99525	.03987 .99021	.04019 .99565	.03988 .99164	.03915 .99814
.09	.00995 .99906	.01920 .99637	.02720 .99228	.03365 .99725	.03808 .99176	.04161 .99620	.04388 .99084	.04492 .99586	.04519 .99134	.04490 .99729
.10	.00997 .99915	.01937 .99670	.02773 .99291	.03474 .99815	.04029 .99821	.04442 .99724	.04728 .99172	.04905 .99644	.04995 .99152	.05018 .99701

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+18)$$

$$K=\sin 40$$

1/B	1/A = .01	1/A = .02	1/A = .03	1/A = .04	1/A = .05	1/A = .06	1/A = .07	1/A = .08	1/A = .09	1/A = .10
.01	.00435 .99598	.00348 .99357	.00261 .99277	.00205 .99244	.00167 .99227	.00141 .99218	.00122 .99212	.00107 .99209	.00096 .99206	.00086 .99204
.02	.00697 .99678	.00871 .99196	.00803 .99887	.00696 .99714	.00600 .99614	.00522 .99553	.00460 .99514	.00409 .99467	.00369 .99466	.00335 .99455
.03	.00784 .99759	.01206 .99258	.01306 .99794	.01253 .99457	.01152 .99227	.01044 .99071	.00945 .99963	.00858 .99867	.00783 .99830	.00716 .99789
.04	.00820 .99811	.01393 .99357	.01671 .99842	.01741 .99392	.01698 .99039	.01606 .99774	.01498 .99576	.01391 .99428	.01290 .99316	.01199 .99229
.05	.00837 .99845	.01501 .99445	.01921 .99935	.02123 .99430	.02175 .99989	.02139 .99627	.02056 .99338	.01953 .99110	.01844 .99929	.01737 .99786
.06	.00847 .99870	.01567 .99517	.02090 .99935	.02411 .99514	.02568 .99021	.02609 .99566	.02577 .99218	.02502 .99912	.02405 .99660	.02298 .99454
.07	.00853 .99887	.01610 .99575	.02207 .99126	.02625 .99613	.02882 .99096	.03009 .99613	.03043 .99183	.03014 .99610	.02946 .99491	.02854 .99222
.08	.00857 .99901	.01639 .99622	.02291 .99206	.02787 .99712	.03130 .99190	.03342 .99680	.03448 .99206	.03476 .99779	.03450 .99402	.03387 .99074
.09	.00860 .99912	.01660 .99659	.02352 .99276	.02909 .99805	.03327 .99290	.03616 .99789	.03794 .99756	.03885 .99799	.03909 .99375	.03864 .99595
.10	.00862 .99920	.01675 .99691	.02397 .99336	.03003 .99889	.03484 .99388	.03841 .99866	.04088 .99348	.04242 .99653	.04321 .99392	.04341 .99570

$$\frac{U/K+IV/K}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 45$$

1/8	1/A= .01	1/A= .02	1/A= .03	1/A= .04	1/A= .05	1/A= .06	1/A= .07	1/A= .08	1/A= .09	1/A= .10
.01	.00381 .99619	.00305 .99390	.00229 .99314	.00179 .99282	.00147 .99267	.00124 .99258	.00107 .99253	.00094 .99249	.00084 .99247	.00076 .99245
.02	.00610 .99695	.00763 .99237	.00704 .98944	.00610 .98780	.00526 .98695	.00457 .98627	.00403 .98590	.00359 .98564	.00323 .98546	.00293 .98533
.03	.00687 .99771	.01056 .99296	.01144 .98856	.01098 .98535	.01009 .98317	.00915 .98170	.00828 .98067	.00752 .97994	.00686 .97941	.00629 .97901
.04	.00718 .99821	.01220 .99390	.01464 .98901	.01525 .98474	.01487 .98139	.01407 .97887	.01313 .97700	.01219 .97559	.01131 .97453	.01050 .97371
.05	.00733 .99853	.01315 .99474	.01583 .98990	.01860 .98511	.01906 .98092	.01874 .97748	.01801 .97474	.01711 .97257	.01616 .97086	.01522 .96950
.06	.00742 .99876	.01373 .99542	.01831 .99084	.02112 .98590	.02250 .98122	.02286 .97710	.02258 .97360	.02193 .97070	.02108 .96831	.02014 .96635
.07	.00748 .99893	.01411 .99597	.01933 .99171	.02300 .98684	.02525 .98194	.02636 .97736	.02686 .97327	.02641 .96973	.02582 .96671	.02501 .96415
.08	.00751 .99906	.01436 .99641	.02007 .99247	.02441 .98778	.02742 .98283	.02924 .97799	.03021 .97349	.03046 .96944	.03023 .96587	.02968 .96275
.09	.00753 .99916	.01454 .99677	.02060 .99313	.02548 .98866	.02914 .98378	.03167 .97883	.03324 .97407	.03404 .96963	.03425 .96561	.03404 .96201
.10	.00755 .99924	.01467 .99706	.02100 .99370	.02631 .98946	.03052 .98471	.03365 .97976	.03582 .97485	.03717 .97015	.03786 .96577	.03804 .96177

$$\frac{U/K+IV/K}{U+IV-SN} \frac{-1}{(A+IB)}$$

$$K=\sin 50$$

1/B	1/A= .01	1/A= .02	1/A= .03	1/A= .04	1/A= .05	1/A= .06	1/A= .07	1/A= .08	1/A= .09	1/A= .10
.01	.00337 .99635	.00270 .99416	.00202 .99342	.00159 .99312	.00130 .99290	.00119 .99284	.00094 .99284	.00083 .99281	.00074 .99278	.00067 .99277
.02	.00540 .99708	.00674 .99269	.00622 .98988	.00539 .98831	.00465 .98740	.00404 .98685	.00356 .98649	.00317 .98625	.00286 .98508	.00259 .98595
.03	.00697 .99781	.00934 .99325	.01011 .98904	.00971 .98597	.00892 .98388	.00809 .98247	.00732 .98149	.00665 .98079	.00605 .98028	.00556 .97990
.04	.00635 .99828	.01079 .99415	.01295 .98948	.01348 .98538	.01315 .98218	.01244 .97977	.01161 .97797	.01078 .97662	.01000 .97560	.00929 .97481
.05	.00649 .99859	.01163 .99496	.01488 .99032	.01645 .98574	.01685 .98172	.01657 .97843	.01593 .97581	.01513 .97373	.01429 .97209	.01346 .97078
.06	.00656 .99882	.01214 .99561	.01619 .99123	.01667 .98650	.01689 .98202	.02022 .97806	.01997 .97471	.01939 .97193	.01864 .96954	.01781 .96777
.07	.00661 .99898	.01247 .99614	.01710 .99206	.02034 .98740	.02232 .98270	.02331 .97831	.02358 .97440	.02336 .97101	.02283 .96811	.02212 .96565
.08	.00664 .99910	.01270 .99656	.01774 .99279	.02158 .98830	.02425 .98356	.02589 .97892	.02671 .97462	.02694 .97073	.02674 .96731	.02625 .96433
.09	.00666 .99920	.01286 .99690	.01821 .99342	.02253 .98914	.02577 .98446	.02801 .97973	.02939 .97517	.03010 .97092	.03029 .96706	.03011 .96361
.10	.00668 .99928	.01297 .99719	.01857 .99396	.02326 .98991	.02698 .98536	.02975 .98062	.03167 .97591	.03287 .97142	.03348 .96723	.03365 .96339

$$\frac{U/K+IV/K}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 55$$

1/B	1/A= .01	1/A= .02	1/A= .03	1/A= .04	1/A= .05	1/A= .06	1/A= .07	1/A= .08	1/A= .09	1/A= .10
.01	.00300 .99647	.00240 .99436	.00180 .99365	.00141 .99336	.00115 .99322	.00097 .99314	.00084 .99309	.00074 .99306	.00066 .99303	.00059 .99302
.02	.00480 .99718	.00600 .99295	.00554 .99024	.00480 .98872	.00414 .98784	.00360 .98731	.00317 .98696	.00282 .98673	.00254 .98556	.00231 .98644
.03	.00540 .99788	.00831 .99349	.00900 .98942	.00864 .98846	.00794 .98445	.00719 .98308	.00651 .98213	.00591 .98146	.00540 .98096	.00495 .98060
.04	.00565 .99834	.00960 .99436	.01152 .98984	.01209 .98889	.01170 .98280	.01107 .98047	.01033 .97874	.00959 .97744	.00890 .97645	.00826 .97569
.05	.00577 .99864	.01035 .99514	.01323 .99066	.01463 .98823	.01499 .98336	.01474 .97918	.01417 .97665	.01346 .97464	.01271 .97306	.01198 .97160
.06	.00584 .99886	.01080 .99577	.01440 .99153	.01661 .98997	.01770 .98265	.01799 .97883	.01777 .97560	.01725 .97291	.01658 .97070	.01585 .96889
.07	.00588 .99901	.01110 .99627	.01521 .99233	.01809 .98784	.01986 .98331	.02074 .97907	.02098 .97529	.02078 .97202	.02031 .96923	.01969 .96686
.08	.00591 .99913	.01129 .99668	.01578 .99304	.01920 .98870	.02157 .98413	.02303 .97965	.02377 .97530	.02397 .97176	.02379 .96845	.02336 .96557
.09	.00593 .99923	.01144 .99701	.01620 .99365	.02004 .98952	.02292 .98501	.02492 .98044	.02615 .97603	.02678 .97194	.02695 .96822	.02679 .96489
.10	.00594 .99930	.01154 .99729	.01652 .99417	.02069 .99026	.02400 .98587	.02647 .98129	.02817 .97676	.02924 .97242	.02979 .96837	.02994 .96467

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN (A+IB)$$

$$K=\sin 60$$

1/B	1/A= .01	1/A= .02	1/A= .03	1/A= .04	1/A= .05	1/A= .06	1/A= .07	1/A= .08	1/A= .09	1/A= .10
.01	.00268 .99658	.00214 .99452	.00161 .99384	.00126 .99355	.00103 .99341	.00087 .99334	.00075 .99329	.00066 .99326	.00059 .99323	.00053 .99322
.02	.00428 .99726	.00335 .99315	.00494 .99052	.00428 .98904	.00369 .98819	.00321 .98767	.00283 .98734	.00252 .98711	.00227 .98695	.00206 .98683
.03	.00482 .99794	.00741 .99368	.00803 .98972	.00773 .98635	.00708 .98489	.00642 .98356	.00581 .98264	.00528 .98199	.00482 .98151	.00442 .98115
.04	.00504 .99839	.00657 .99452	.00828 .99013	.00771 .98630	.00704 .98329	.00638 .98103	.00572 .97935	.00516 .97808	.00460 .97712	.00404 .97639
.05	.00515 .99868	.00623 .99527	.00811 .99033	.00736 .98663	.00658 .98287	.00581 .97978	.00504 .97732	.00428 .97537	.00352 .97383	.00276 .97261
.06	.00521 .99889	.00644 .99589	.00825 .99178	.00734 .98734	.00644 .98314	.00558 .97944	.00472 .97629	.00386 .97369	.00300 .97154	.00214 .96978
.07	.00525 .99904	.00644 .99638	.00825 .99255	.00734 .98819	.00644 .98378	.00558 .97967	.00472 .97600	.00386 .97282	.00300 .97011	.00214 .96781
.08	.00527 .99916	.00644 .99678	.00825 .99324	.00734 .98903	.00644 .98459	.00558 .98025	.00472 .97621	.00386 .97257	.00300 .96936	.00214 .96656
.09	.00529 .99925	.00644 .99710	.00825 .99383	.00734 .98982	.00644 .98544	.00558 .98100	.00472 .97672	.00386 .97274	.00300 .96913	.00214 .96589
.10	.00530 .99932	.00644 .99736	.00825 .99434	.00734 .98954	.00644 .98628	.00558 .98183	.00472 .97743	.00386 .97321	.00300 .96928	.00214 .96568

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 65$$

1/B	1/A= .01	1/A= .02	1/A= .03	1/A= .04	1/A= .05	1/A= .05	1/A= .07	1/A= .08	1/A= .09	1/A= .10
.01	.00239 .99865	.00191 .99465	.00143 .99398	.00112 .99370	.00092 .99357	.00077 .99349	.00067 .99344	.00059 .99341	.00052 .99339	.00047 .99338
.02	.00382 .99732	.00478 .99331	.00441 .99074	.00382 .98329	.00329 .98846	.00287 .98796	.00252 .98763	.00225 .98741	.00202 .98725	.00184 .98713
.03	.00430 .99799	.00662 .99362	.00717 .98996	.00688 .98715	.00632 .98524	.00573 .98394	.00519 .98304	.00471 .98240	.00430 .98194	.00394 .98159
.04	.00450 .99843	.00765 .99465	.00917 .99036	.00956 .98561	.00932 .98358	.00882 .98147	.00823 .97982	.00764 .97859	.00709 .97765	.00658 .97693
.05	.00460 .99871	.00824 .99538	.01054 .99114	.01165 .98694	.01194 .98326	.01174 .98025	.01129 .97794	.01073 .97594	.01013 .97444	.00954 .97324
.06	.00465 .99831	.00860 .99598	.01147 .99197	.01323 .98764	.01410 .98353	.01433 .97991	.01415 .97684	.01375 .97430	.01321 .97220	.01263 .97048
.07	.00468 .99906	.00884 .99645	.01211 .99273	.01441 .98846	.01582 .98416	.01652 .98014	.01671 .97656	.01656 .97345	.01618 .97060	.01568 .96855
.08	.00471 .99918	.00900 .99685	.01257 .99340	.01529 .98928	.01718 .98494	.01834 .98070	.01893 .97676	.01909 .97320	.01895 .97007	.01861 .96733
.09	.00472 .99927	.00911 .99716	.01291 .99397	.01597 .99006	.01826 .98578	.01985 .98144	.02083 .97726	.02134 .97338	.02147 .96984	.02134 .96659
.10	.00473 .99934	.00919 .99743	.01316 .99447	.01648 .99076	.01912 .98660	.02108 .98225	.02244 .97795	.02329 .97383	.02373 .97000	.02385 .96648

U/K+IV/K,
-1
U+IV=SN (A+IB)

K=SIN 70

1/B	1/A= .01	1/A= .02	1/A= .03	1/A= .04	1/A= .05	1/A= .06	1/A= .07	1/A= .08	1/A= .09	1/A= .10
.01	.00212 .99672	.00170 .99474	.00127 .99409	.00100 .99382	.00082 .99368	.00069 .99361	.00059 .99356	.00052 .99353	.00047 .99351	.00042 .99350
.02	.00340 .99737	.00425 .99743	.00392 .99098	.00340 .98949	.00293 .98867	.00255 .98815	.00224 .98785	.00200 .98764	.00180 .98748	.00163 .98737
.03	.00382 .99603	.00588 .99394	.00637 .99015	.00612 .98739	.00562 .98551	.00510 .98424	.00461 .98335	.00419 .98273	.00382 .98227	.00351 .98192
.04	.00400 .99645	.00600 .99474	.00616 .99054	.00550 .98666	.00529 .98398	.00484 .98181	.00431 .98019	.00379 .97898	.00330 .97805	.00265 .97735
.05	.00409 .99674	.00733 .99547	.00337 .99130	.00336 .98718	.00352 .98357	.00404 .98061	.00404 .97825	.00954 .97638	.00901 .97490	.00648 .97373
.06	.00413 .99693	.00765 .99606	.00420 .99211	.00477 .98786	.00523 .98384	.00574 .98023	.00628 .97727	.00679 .97477	.00715 .97271	.00723 .97102
.07	.00416 .99908	.00786 .99653	.00477 .99286	.00521 .98367	.00569 .98445	.00619 .98051	.00669 .97699	.00712 .97394	.00739 .97133	.00755 .96913
.08	.00418 .99919	.00800 .99691	.00478 .99352	.00526 .98548	.00572 .98522	.00631 .98106	.00683 .97718	.00698 .97369	.00685 .97062	.00655 .96793
.09	.00420 .99928	.00810 .99722	.00477 .99408	.00524 .99024	.00573 .98604	.00625 .98178	.00682 .97768	.00697 .97386	.00699 .97040	.00698 .96730
.10	.00421 .99935	.00817 .99747	.00470 .99457	.00465 .99093	.00500 .98684	.00574 .98258	.00619 .97836	.00671 .97431	.00710 .97055	.00721 .96710

$$\frac{U/K+IV/K}{-1}$$

$$U+IV=SN \quad (A+IB)$$

K=SN 75

1/B	1/A= .01	1/A= .02	1/A= .03	1/A= .04	1/A= .05	1/A= .06	1/A= .07	1/A= .08	1/A= .09	1/A= .10
.01	.00187 .99676	.00150 .99482	.00112 .99417	.00088 .99390	.00072 .99377	.00061 .99370	.00052 .99365	.00046 .99362	.00041 .99360	.00037 .99359
.02	.00299 .99741	.00374 .99352	.00345 .99103	.00299 .98964	.00258 .98883	.00224 .98834	.00198 .98802	.00176 .98781	.00150 .98766	.00144 .98754
.03	.00337 .99806	.00518 .99402	.00561 .99028	.00538 .98756	.00495 .98571	.00449 .98445	.00406 .98358	.00369 .98296	.00336 .98251	.00309 .98217
.04	.00352 .99848	.00598 .99402	.00718 .99067	.00748 .98704	.00729 .98420	.00690 .98205	.00644 .98047	.00593 .97927	.00555 .97837	.00515 .97767
.05	.00360 .99875	.00645 .99553	.00825 .99142	.00912 .98735	.00935 .98380	.00913 .98068	.00884 .97855	.00839 .97671	.00793 .97525	.00747 .97409
.06	.00364 .99895	.00673 .99611	.00898 .99222	.01036 .98803	.01103 .98406	.01121 .98055	.01108 .97758	.01076 .97512	.01034 .97309	.00988 .97142
.07	.00367 .99909	.00692 .99658	.00948 .99296	.01128 .98883	.01238 .98467	.01293 .98079	.01308 .97731	.01296 .97430	.01267 .97173	.01228 .96956
.08	.00368 .99920	.00704 .99695	.00984 .99361	.01197 .98963	.01345 .98543	.01436 .98132	.01482 .97750	.01496 .97406	.01483 .97102	.01457 .96838
.09	.00369 .99929	.00713 .99726	.01010 .99417	.01249 .99037	.01429 .98623	.01553 .98203	.01630 .97799	.01670 .97423	.01681 .97081	.01671 .96775
.10	.00370 .99936	.00719 .99751	.01030 .99465	.01290 .99105	.01496 .98702	.01650 .98282	.01756 .97866	.01823 .97467	.01857 .97096	.01867 .96755

$$\frac{U/K+IV/K^2}{-1}$$

$$U+IV=SN \quad (A+18)$$

K=SIN 80

1/B	1/A= .01	1/A= .02	1/A= .03	1/A= .04	1/A= .05	1/A= .06	1/A= .07	1/A= .08	1/A= .09	1/A= .10
.01	.00161 .99679	.00129 .99487	.00097 .99423	.00076 .99396	.00062 .99383	.00052 .99376	.00045 .99371	.00040 .99368	.00035 .99366	.00032 .99365
.02	.00258 .99743	.00322 .99358	.00297 .99112	.00258 .98974	.00222 .98894	.00193 .98845	.00170 .98814	.00151 .98793	.00136 .98777	.00124 .98766
.03	.00290 .99808	.00446 .99408	.00483 .99038	.00464 .98768	.00426 .98585	.00386 .98460	.00350 .98374	.00317 .98313	.00290 .98268	.00266 .98235
.04	.00303 .99849	.00515 .99487	.00618 .99076	.00644 .98717	.00628 .98435	.00594 .98223	.00554 .98066	.00515 .97947	.00478 .97858	.00444 .97788
.05	.00310 .99877	.00555 .99557	.00710 .99151	.00765 .98748	.00805 .98396	.00791 .98106	.00761 .97876	.00723 .97693	.00683 .97549	.00643 .97434
.06	.00313 .99896	.00580 .99615	.00773 .99230	.00892 .98815	.00950 .98421	.00965 .98074	.00954 .97780	.00926 .97536	.00890 .97335	.00851 .97170
.07	.00316 .99910	.00595 .99661	.00816 .99303	.00971 .98894	.01066 .98481	.01113 .98096	.01126 .97753	.01116 .97455	.01091 .97201	.01057 .96985
.08	.00317 .99921	.00606 .99698	.00847 .99367	.01031 .98973	.01158 .98557	.01236 .98150	.01276 .97772	.01287 .97431	.01277 .97130	.01254 .96868
.09	.00318 .99930	.00614 .99728	.00870 .99422	.01076 .99047	.01230 .98636	.01337 .98221	.01404 .97820	.01438 .97448	.01447 .97109	.01438 .96806
.10	.00319 .99936	.00619 .99753	.00886 .99470	.01111 .99114	.01288 .98715	.01421 .98299	.01512 .97886	.01570 .97492	.01599 .97124	.01607 .96787

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 85$$

1/3	1/A= .01	1/A= .02	1/A= .03	1/A= .04	1/A= .05	1/A= .05	1/A= .06	1/A= .07	1/A= .08	1/A= .09	1/A= .10
.01	.00131 .99681	.00105 .99490	.00079 .99426	.00062 .99400	.00050 .99387	.00042 .99379	.00037 .99375	.00032 .99372	.00029 .99370	.00026 .99369	
.02	.00210 .99745	.00262 .99362	.00242 .99117	.00210 .99079	.00181 .98900	.00157 .98852	.00139 .98821	.00123 .98799	.00111 .98784	.00101 .98774	
.03	.00236 .99809	.00363 .99411	.00393 .99043	.00377 .98775	.00347 .98593	.00314 .98469	.00284 .98384	.00258 .98323	.00236 .98278	.00216 .98245	
.04	.00247 .99850	.00419 .99490	.00503 .99081	.00524 .98724	.00511 .98444	.00483 .98234	.00451 .98077	.00419 .97959	.00389 .97870	.00361 .97801	
.05	.00252 .99877	.00452 .99560	.00578 .99155	.00639 .98755	.00655 .98405	.00644 .98117	.00619 .97888	.00588 .97706	.00555 .97563	.00523 .97449	
.06	.00255 .99897	.00472 .99617	.00629 .99234	.00725 .98822	.00773 .98430	.00785 .98085	.00776 .97793	.00754 .97550	.00724 .97350	.00692 .97186	
.07	.00257 .99911	.00484 .99663	.00664 .99307	.00790 .98900	.00867 .98490	.00906 .98107	.00916 .97766	.00908 .97470	.00887 .97217	.00860 .97002	
.08	.00258 .99921	.00493 .99700	.00689 .99370	.00838 .98979	.00942 .98565	.01006 .98161	.01038 .97785	.01047 .97446	.01039 .97147	.01020 .96886	
.09	.00259 .99930	.00499 .99730	.00707 .99426	.00875 .99052	.01001 .98644	.01088 .98231	.01142 .97833	.01170 .97463	.01177 .97126	.01170 .96825	
.10	.00259 .99937	.00504 .99755	.00721 .99473	.00904 .99119	.01048 .98722	.01156 .98309	.01230 .97899	.01277 .97506	.01301 .97140	.01308 .96806	

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 86$$

	1/8	1/A= .01	1/A= .02	1/A= .03	1/A= .04	1/A= .05	1/A= .05	1/A= .07	1/A= .08	1/A= .09	1/A= .10
.01		.00124 .99681	.00099 .99490	.00074 .99426	.00058 .99400	.00048 .99387	.00040 .99380	.00035 .99375	.00030 .99372	.00027 .99370	.00024 .99369
.02		.00198 .99745	.00247 .99363	.00228 .99117	.00198 .99980	.00171 .98901	.00143 .98853	.00131 .98822	.00116 .98800	.00105 .98783	.00095 .98774
.03		.00223 .99609	.00342 .99412	.00371 .99044	.00356 .98776	.00327 .98594	.00297 .98470	.00269 .98385	.00244 .98324	.00222 .98279	.00204 .98246
.04		.00233 .99850	.00396 .99490	.00475 .99082	.00495 .98725	.00442 .98445	.00456 .98233	.00426 .98078	.00395 .97961	.00367 .97871	.00341 .97803
.05		.00238 .99877	.00426 .99560	.00546 .99156	.00603 .98755	.00518 .98406	.00600 .98119	.00584 .97889	.00555 .97708	.00524 .97565	.00494 .97451
.06		.00241 .99897	.00445 .99617	.00594 .99235	.00685 .98822	.00730 .98432	.00742 .98087	.00733 .97794	.00712 .97552	.00684 .97352	.00654 .97188
.07		.00242 .99911	.00457 .99663	.00627 .99307	.00746 .98951	.00819 .98491	.00853 .98103	.00865 .97767	.00857 .97471	.00838 .97219	.00812 .97004
.08		.00244 .99922	.00466 .99700	.00651 .99371	.00792 .98979	.00845 .98566	.00941 .98162	.00980 .97746	.00988 .97448	.00981 .97149	.00963 .95888
.09		.00244 .99930	.00471 .99730	.00668 .99426	.00826 .99033	.00945 .98645	.01027 .98232	.01078 .97834	.01104 .97464	.01112 .97128	.01105 .96827
.10		.00245 .99937	.00476 .99755	.00681 .99473	.00853 .99120	.00990 .98723	.01091 .98313	.01152 .97900	.01206 .97508	.01228 .97142	.01235 .96808

$$\frac{U/K+IV/K}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin \delta$$

1/A/B	1/A= .01	1/A= .02	1/A= .03	1/A= .04	1/A= .05	1/A= .06	1/A= .07	1/A= .08	1/A= .09	1/A= .10
.01	.00115 .99681	.00092 .99490	.00069 .99427	.00044 .99400	.00044 .99387	.00037 .99380	.00032 .99376	.00026 .99373	.00025 .99371	.00023 .99369
.02	.00185 .99745	.00231 .99363	.00213 .99118	.00185 .98981	.00159 .98902	.00138 .98853	.00122 .98822	.00109 .98801	.00098 .98775	.00089 .98775
.03	.00208 .99809	.00320 .99612	.00346 .99044	.00332 .98777	.00305 .98595	.00277 .98471	.00251 .98366	.00227 .98325	.00208 .98280	.00190 .98247
.04	.00217 .99850	.00369 .99490	.00443 .99082	.00461 .98726	.00450 .98446	.00426 .98236	.00397 .98079	.00369 .97962	.00342 .97872	.00318 .97804
.05	.00222 .99877	.00398 .99561	.00509 .99156	.00563 .98756	.00577 .98407	.00567 .98120	.00545 .97890	.00518 .97709	.00489 .97566	.00461 .97452
.06	.00225 .99897	.00415 .99618	.00554 .99235	.00639 .98823	.00681 .98432	.00692 .98088	.00684 .97795	.00664 .97553	.00638 .97353	.00610 .97169
.07	.00226 .99911	.00427 .99663	.00585 .99308	.00696 .98901	.00764 .98492	.00798 .98110	.00807 .97768	.00800 .97473	.00772 .97220	.00758 .97006
.08	.00227 .99922	.00434 .99700	.00607 .99371	.00739 .98980	.00839 .98567	.00886 .98163	.00914 .97787	.00922 .97449	.00915 .97150	.00899 .96890
.09	.00228 .99930	.00440 .99730	.00623 .99426	.00771 .99053	.00882 .98646	.00959 .98233	.01006 .97836	.01031 .97466	.01037 .97129	.01031 .96829
.10	.00229 .99937	.00444 .99755	.00635 .99474	.00796 .99120	.00923 .98724	.01018 .98311	.01084 .97901	.01125 .97509	.01146 .97144	.01152 .96809

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 88$$

I/B	1/A= .01	1/A= .02	1/A= .03	1/A= .04	1/A= .05	1/A= .06	1/A= .07	1/A= .08	1/A= .09	1/A= .10
.01	.00105 .99682	.00064 .99491	.00063 .99427	.00050 .99401	.00041 .99388	.00034 .99360	.00030 .99376	.00026 .99373	.00023 .99371	.00021 .99370
.02	.00169 .99745	.00211 .99363	.00195 .99118	.00169 .98981	.00145 .98902	.00127 .98854	.00111 .98823	.00099 .98801	.00089 .98786	.00081 .98775
.03	.00190 .99809	.00292 .99412	.00316 .99045	.00304 .98777	.00279 .98595	.00253 .98472	.00229 .98386	.00208 .98325	.00190 .98281	.00174 .98248
.04	.00199 .99850	.00338 .99490	.00405 .99083	.00422 .98726	.00411 .98447	.00389 .98236	.00363 .98080	.00337 .97962	.00313 .97873	.00291 .97805
.05	.00203 .99878	.00364 .99561	.00465 .99157	.00514 .98757	.00527 .98407	.00518 .98120	.00498 .97891	.00474 .97710	.00447 .97567	.00421 .97453
.06	.00205 .99897	.00380 .99618	.00506 .99235	.00584 .98824	.00622 .98433	.00633 .98088	.00625 .97796	.00607 .97554	.00583 .97354	.00558 .97190
.07	.00207 .99911	.00390 .99663	.00535 .99308	.00636 .98902	.00698 .98493	.00729 .98110	.00738 .97769	.00731 .97474	.00715 .97221	.00693 .97007
.08	.00208 .99922	.00397 .99700	.00555 .99371	.00675 .98980	.00759 .98567	.00810 .98164	.00836 .97788	.00843 .97450	.00837 .97152	.00822 .96891
.09	.00208 .99930	.00402 .99730	.00570 .99426	.00705 .99054	.00806 .98647	.00876 .98234	.00928 .97836	.00942 .97467	.00948 .97130	.00942 .96830
.10	.00209 .99937	.00406 .99755	.00581 .99474	.00728 .99121	.00844 .98725	.00931 .98311	.00991 .97902	.01028 .97510	.01048 .97145	.01053 .96811

U/K+IV/K'
-1
U+IV=SN (A+IB)

K=SIN 89

1/8	1/A= .01	1/A= .02	1/A= .03	1/A= .04	1/A= .05	1/A= .06	1/A= .07	1/A= .08	1/A= .09	1/A= .10
.01	.00092 .99682	.00074 .99491	.00055 .99427	.00043 .99401	.00035 .99388	.00030 .99381	.00026 .99376	.00023 .99373	.00020 .99371	.00018 .99370
.02	.00147 .99745	.00184 .99363	.00170 .99118	.00147 .98981	.00127 .98902	.00110 .98854	.00097 .98823	.00087 .98802	.00078 .98787	.00071 .98776
.03	.00166 .99809	.00255 .99412	.00276 .99045	.00265 .98777	.00243 .98596	.00221 .98472	.00200 .98387	.00181 .98326	.00166 .98281	.00152 .98248
.04	.00173 .99850	.00294 .99491	.00353 .99083	.00368 .98726	.00359 .98447	.00340 .98237	.00317 .98080	.00294 .97963	.00273 .97874	.00254 .97805
.05	.00177 .99878	.00317 .99561	.00406 .99157	.00449 .98757	.00460 .98408	.00442 .9821	.00435 .97892	.00413 .97711	.00390 .97568	.00368 .97454
.06	.00179 .99897	.00331 .99618	.00442 .99236	.00510 .98924	.00543 .98433	.00552 .98089	.00545 .97797	.00529 .97554	.00509 .97355	.00486 .97191
.07	.00180 .99911	.00340 .99664	.00466 .99308	.00555 .98902	.00609 .98493	.00636 .98111	.00644 .97770	.00638 .97474	.00623 .97222	.00604 .97008
.08	.00181 .99922	.00346 .99700	.00484 .99372	.00589 .98980	.00662 .98568	.00706 .98164	.00729 .97739	.00735 .97451	.00730 .97152	.00717 .96917
.09	.00182 .99930	.00351 .99730	.00497 .99427	.00615 .99054	.00703 .98647	.00764 .98234	.00802 .97837	.00822 .97467	.00827 .97131	.00813 .96831
.10	.00182 .99937	.00354 .99755	.00507 .99474	.00635 .99121	.00736 .98725	.00812 .98312	.00864 .97902	.00897 .97511	.00914 .97146	.00919 .96811

$$\frac{U/K+IV/K'}{-1}$$

$$J+IV=SN \quad (A+18)$$

$$K=\sin 5$$

1/B	1/A= .10	1/A= .20	1/A= .30	1/A= .40	1/A= .50	1/A= .60	1/A= .70	1/A= .80	1/A= .90	1/A=1.00
.10	.31707 .83951	.21240 .77522	.15071 .75883	.11563 .75259	.09350 .74960	.07833 .74795	.06742 .74695	.05913 .74630	.05264 .74585	.04743 .74592
.20	.54151 .82986	.33801 .68908	.33330 .64266	.26394 .62270	.21695 .61255	.18353 .60676	.15885 .60317	.13886 .60079	.12485 .59914	.11272 .59795
.30	.65546 .83564	.57842 .65456	.46610 .58574	.38140 .55252	.31948 .53440	.27346 .52361	.23838 .51677	.21093 .51216	.18897 .50892	.17104 .50657
.40	.72377 .84125	.66710 .63848	.56075 .55520	.47217 .51114	.40272 .48561	.34870 .46983	.30626 .45954	.27240 .45251	.24493 .44753	.22228 .44387
.50	.76954 .84544	.72654 .62997	.62966 .53736	.54282 .48505	.47048 .45314	.41170 .43273	.36415 .41911	.32545 .40968	.29361 .40292	.26711 .39794
.60	.80246 .84847	.76861 .62499	.68126 .52624	.59860 .46774	.52441 .43440	.46480 .40592	.41373 .38920	.37134 .37747	.33599 .36901	.30630 .36274
.70	.82728 .85068	.79977 .62186	.72097 .51891	.64334 .45575	.57225 .41413	.50992 .38588	.45651 .36629	.41128 .35241	.37306 .34233	.34065 .33484
.80	.84669 .85233	.82369 .61976	.75229 .51387	.67979 .44717	.61105 .40194	.54864 .37048	.49371 .34828	.44628 .33231	.40566 .32077	.37092 .31213
.90	.86226 .85356	.84449 .61830	.77754 .51026	.70993 .44085	.64392 .39265	.58214 .35838	.52634 .33379	.47720 .31600	.43454 .30296	.39774 .29324
1.00	.87501 .85452	.85788 .61724	.79826 .50760	.73517 .43606	.67206 .38542	.61137 .34870	.55518 .32134	.50471 .30238	.45030 .28799	.42165 .27725

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 10$$

1/B	1/A=	1/A=	1/A=	1/A=	1/A=	1/A=	1/A=	1/A=	1/A=	1/A=
	.10	.20		.40	.50	.60	.70	.80	.90	1/A=1.00
.10	.17639 .90630	.13223 .85571		.07499 .83470	.06096 .83102	.05124 .83022	.04416 .82925	.03877 .82861	.03455 .82816	.03114 .82785
.20	.29222 .91903	.31588 .80306	.75003	.20960 .72641	.17423 .71399	.14832 .70686	.12880 .70242	.11367 .69948	.10164 .69744	.09186 .69596
.30	.33706 .93657	.44798 .79134	.39411 .70409	.33124 .66087	.28072 .63737	.24177 .62342	.21152 .61456	.18760 .60861	.16834 .60744	.15254 .60140
.40	.35719 .94913	.53920 .79074	.49657 .67872	.42869 .61995	.36950 .58639	.32160 .56582	.28345 .55247	.25263 .54337	.22747 .53693	.20664 .53222
.50	.36762 .95792	.60470 .79353	.57320 .66383	.50529 .59329	.44201 .55127	.38863 .52470	.34470 .50709	.30861 .49494	.27874 .48627	.25379 .47988
.60	.37364 .96426	.65383 .79705	.63143 .65451	.56590 .57522	.50142 .52626	.44483 .49439	.39691 .47286	.35678 .45783	.32314 .44702	.29479 .43903
.70	.37740 .96900	.69208 .80045	.67665 .64837	.61452 .56255	.55059 .50791	.49233 .47142	.44173 .44632	.39848 .42860	.36177 .41578	.33054 .40628
.80	.37990 .97266	.72273 .80347	.71252 .64413	.65410 .55338	.59174 .49413	.53304 .45361	.48057 .42525	.43489 .40584	.39560 .39033	.36190 .37941
.90	.38164 .97557	.74787 .80609	.74155 .64109	.68679 .54658	.62654 .48355	.56811 .43952	.51451 .40821	.46694 .38567	.42547 .36919	.38960 .35694
1.00	.38290 .97793	.76889 .80832	.76544 .63886	.71415 .54141	.65629 .47528	.59863 .42820	.54443 .39421	.49538 .36949	.45204 .35134	.41423 .33784

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN(A+IB)$$

K=SIN 15

1/B	1/A= .10	1/A= .20	1/A= .30	1/A= .40	1/A= .50	1/A= .60	1/A= .70	1/A= .80	1/A= .90	1/A=1.00
.10	.11923 .92931	.09237 .38889	.06833 .87618	.05327 .87107	.04341 .86057	.03654 .86717	.03151 .86632	.02768 .86576	.02467 .86537	.02225 .86509
.20	.19405 .94146	.22758 .85412	.19601 .80602	.16277 .78248	.13684 .76996	.11723 .76266	.10219 .75608	.09041 .75503	.08096 .75291	.07328 .75137
.30	.22067 .95532	.32333 .85455	.31253 .77440	.27317 .72884	.23575 .70297	.20502 .68737	.18042 .67737	.16062 .67063	.14449 .66589	.13116 .66243
.40	.23201 .96467	.38577 .86479	.40531 .76150	.36783 .69614	.32338 .65728	.28507 .63318	.25277 .61747	.22619 .60675	.20421 .59915	.18586 .59358
.50	.23770 .97100	.42733 .87674	.47782 .75718	.44562 .67542	.39854 .62520	.35423 .59332	.31612 .57219	.28409 .55763	.25725 .54724	.23464 .53960
.60	.24093 .97549	.45599 .88804	.53516 .75677	.50913 .66173	.46100 .60199	.41318 .56326	.37077 .53721	.33443 .51908	.30359 .50606	.27739 .49645
.70	.24292 .97880	.47643 .89810	.58133 .75812	.56116 .65232	.51332 .58475	.46344 .54009	.41792 .50359	.37817 .48818	.34402 .47272	.31475 .46128
.80	.24424 .98135	.49144 .90687	.61924 .76019	.60424 .64564	.55742 .57165	.50655 .52187	.45883 .48739	.41636 .46294	.37943 .44522	.34752 .43209
.90	.24515 .98335	.50275 .91448	.65088 .76250	.64027 .64075	.59490 .56152	.54380 .50732	.49459 .46924	.44998 .44200	.41065 .42217	.37642 .40746
1.00	.24580 .90498	.51144 .92109	.67771 .76481	.67072 .63708	.62702 .55353	.57622 .49552	.52608 .45419	.47976 .42437	.43839 .40256	.40207 .38638

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+I8)$$

K=SIN 20

1/B	1/A= .10	1/A= .20	1/A= .30	1/A= .40	1/A= .50	1/A= .60	1/A= .70	1/A= .80	1/A= .90	1/A=1.00
.10	.08951 .94117	.07022 .90607	.05221 .89584	.04079 .89137	.03327 .88917	.02803 .88794	.02418 .88719	.02125 .88669	.01894 .88635	.01708 .88611
.20	.14471 .95197	.17435 .87985	.15402 .83751	.12965 .81580	.10980 .80399	.09447 .79701	.08257 .79260	.07319 .78965	.06563 .78759	.05945 .78609
.30	.16382 .96362	.24592 .88378	.24892 .81480	.22400 .77171	.19641 .74802	.17238 .73015	.15254 .71985	.13631 .71204	.12293 .70789	.11180 .70427
.40	.17184 .97133	.29002 .89527	.32430 .80992	.30779 .74736	.27749 .70731	.24747 .68169	.22111 .66472	.19884 .65305	.18012 .64473	.16433 .63862
.50	.17584 .97652	.31759 .90712	.38235 .81306	.37852 .73428	.34876 .68036	.31483 .64593	.28347 .62239	.25617 .60606	.23283 .59435	.21291 .58572
.60	.17810 .98017	.33550 .91756	.42725 .81961	.43762 .72759	.41017 .66251	.37389 .61803	.33865 .58922	.30720 .56848	.27990 .55356	.25638 .54253
.70	.17949 .98287	.34761 .92637	.46252 .82744	.48717 .72453	.46284 .61922	.42525 .59791	.38706 .56269	.35218 .53788	.32149 .51998	.29484 .50674
.80	.18240 .98493	.35611 .93713	.49068 .83555	.52907 .72356	.50812 .63940	.46993 .58138	.42952 .54110	.39182 .51257	.35821 .49192	.32880 .47663
.90	.18104 .98655	.36226 .93989	.51353 .84340	.56486 .72380	.54722 .63198	.50891 .56803	.46691 .52326	.42687 .49131	.39074 .46812	.35886 .45094
1.00	.18149 .98787	.36684 .94510	.53234 .85103	.59573 .72471	.58118 .62625	.54317 .55722	.50000 .50834	.45804 .47324	.41969 .44768	.38550 .42876

$$\frac{U/K+IV/K}{-1}$$

$$U+IV=SN \quad (A+[8])$$

$$K=\sin 25$$

	1/8	1/A=.10	1/A=.20	1/A=.30	1/A=.40	1/A=.50	1/A=.60	1/A=.70	1/A=.80	1/A=.90	1/A=1.00
.10		.07135 .94848	.05630 .91817	.04197 .90831	.03283 .90430	.02679 .90232	.02257 .90122	.01948 .90054	.01712 .90009	.01526 .89979	.01377 .89957
.20		.11498 .95820	.14019 .89338	.12545 .85743	.10643 .83747	.09054 .82645	.07810 .81989	.06839 .81572	.06068 .81293	.05447 .81097	.04936 .80954
.30		.12991 .96844	.19678 .90026	.20351 .83360	.18647 .79979	.16531 .77525	.14607 .75973	.12984 .74962	.11636 .74266	.10516 .73771	.09578 .73408
.40		.13613 .97517	.23064 .91130	.26475 .83713	.25931 .78114	.23718 .74232	.21381 .71667	.19250 .69936	.17393 .68133	.15808 .67869	.14556 .67232
.50		.13923 .97938	.25123 .92215	.31056 .84444	.31986 .77350	.30152 .72135	.27611 .68550	.25132 .66094	.22850 .64351	.20853 .63100	.19125 .62173
.60		.14037 .98285	.26430 .93163	.34480 .85313	.36965 .77206	.35804 .70799	.33261 .66250	.30467 .63074	.27831 .60824	.25475 .59194	.23410 .57984
.70		.14235 .98518	.27298 .93911	.37065 .86250	.41183 .77409	.40717 .69953	.38243 .64514	.35243 .60670	.32308 .57932	.29635 .55944	.27268 .54469
.80		.14275 .98697	.27899 .94543	.39047 .87163	.44723 .77804	.44999 .69425	.42651 .63171	.39501 .58713	.36311 .55521	.33358 .53200	.30717 .51477
.90		.14324 .98838	.28329 .95067	.40588 .88017	.47722 .78106	.48749 .69198	.46553 .62122	.43300 .57094	.39892 .53480	.36687 .50849	.33798 .48899
1.00		.14359 .98951	.28647 .95505	.41805 .88800	.50287 .78944	.52050 .69930	.50032 .61273	.46697 .55734	.43103 .51731	.39673 .48813	.36555 .46652

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN(A+IB)$$

$$K=\sin 30$$

	1/A= .10	1/A= .20	1/A= .30	1/A= .40	1/A= .50	1/A= .60	1/A= .70	1/A= .80	1/A= .90	1/A=1.00
1/0										
.10	.05907 .95344	.04677 .92591	.03491 .91691	.02732 .91323	.02231 .91192	.01880 .91041	.01622 .90979	.01426 .90938	.01271 .90910	.01147 .90889
.20	.09503 .96235	.11660 .90577	.10510 .87107	.08958 .85256	.07642 .84224	.06604 .83607	.05789 .83213	.05140 .82948	.04616 .82763	.04185 .82628
.30	.10726 .97162	.16317 .91087	.17082 .85612	.15011 .81921	.14119 .79596	.12535 .78110	.11177 .77125	.10038 .75446	.09086 .75961	.08285 .75605
.40	.11234 .97769	.19060 .92127	.22153 .85668	.21971 .80415	.20427 .76725	.18577 .74225	.16815 .72512	.15252 .71308	.13900 .70439	.12737 .69794
.50	.11486 .98175	.20703 .93124	.25885 .86364	.27134 .79971	.26124 .75027	.24247 .71499	.22221 .69016	.20316 .67246	.18613 .65957	.17116 .64996
.60	.11628 .98450	.21736 .93966	.28607 .87272	.31398 .80118	.31129 .74082	.29397 .69572	.27214 .66327	.25013 .63988	.23023 .62276	.21223 .60996
.70	.11716 .98670	.22416 .94655	.30614 .88206	.34884 .80583	.35491 .73622	.34018 .68196	.31754 .64217	.29243 .61326	.27366 .59203	.24397 .57617
.80	.11773 .98830	.22884 .95218	.32117 .89089	.37753 .81210	.39293 .73474	.37152 .67204	.35860 .62528	.33265 .59110	.30748 .56597	.28416 .54721
.90	.11813 .98957	.23219 .95683	.33263 .89495	.40129 .81917	.42619 .73529	.41854 .66483	.39569 .61152	.36813 .57236	.34063 .54354	.31506 .52207
1.00	.11841 .99059	.23463 .96071	.34150 .90619	.42113 .82644	.45544 .73716	.45178 .65957	.42927 .60014	.40031 .55628	.37074 .52400	.34297 .50000

$$U/K+IV/K \cdot \frac{-1}{(A+IB)}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 35$$

1/B	1/A= .10	1/A= .20	1/A= .30	1/A= .40	1/A= .50	1/A= .60	1/A= .70	1/A= .80	1/A= .90	1/A=1.00
.10	.05018 .95701	.03981 .93153	.02974 .92316	.02329 .91974	.01902 .91806	.01603 .91711	.01383 .91653	.01216 .91615	.01084 .91589	.00978 .91570
.20	.08065 .96532	.09931 .91319	.08992 .88094	.07687 .86358	.06569 .85385	.05683 .84801	.04985 .84428	.04429 .84176	.03979 .83999	.03609 .83871
.30	.09096 .97388	.13872 .91828	.14622 .86784	.13625 .83328	.12226 .81121	.10890 .79697	.09732 .78746	.08754 .78088	.07933 .77617	.07240 .77270
.40	.09524 .97948	.16170 .92810	.16931 .86926	.18957 .82052	.17773 .78553	.16262 .76139	.14782 .74465	.13449 .73279	.12283 .72417	.11273 .71775
.50	.09737 .98321	.17536 .93738	.22052 .87617	.23399 .81795	.22789 .77132	.21347 .73715	.19690 .71265	.18085 .69497	.16623 .68197	.15325 .67223
.60	.09856 .98594	.18389 .94515	.24291 .88541	.27008 .82092	.27185 .76452	.25991 .72083	.24274 .68056	.22467 .66491	.20753 .64740	.19195 .63422
.70	.09930 .98777	.18948 .95147	.25933 .89443	.29922 .82676	.30995 .76247	.30175 .70998	.28483 .67016	.25576 .64061	.24593 .61862	.23798 .60295
.80	.09978 .98924	.19332 .95663	.27142 .90276	.32288 .83394	.34291 .76345	.33924 .70296	.32322 .65590	.30254 .62061	.28125 .59428	.26110 .57444
.90	.10011 .99041	.19605 .96088	.28053 .91031	.34198 .84161	.37148 .76636	.37298 .69864	.35821 .64470	.33669 .60388	.31362 .57336	.29139 .55040
1.00	.10035 .99135	.19806 .96441	.28753 .91700	.35759 .84930	.39633 .77048	.40329 .69624	.39013 .63578	.36796 .58965	.34324 .55513	.31903 .52921

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 40$$

1/B	1/A= .10	1/A= .20	1/A= .30	1/A= .40	1/A= .50	1/A= .60	1/A= .70	1/A= .80	1/A= .90	1/A=1.00
.10	.04341 .95970	.03444 .93576	.02578 .92789	.02019 .92466	.01649 .92307	.01390 .92218	.01199 .92163	.01054 .92127	.00940 .92103	.00848 .92085
.20	.06972 .96753	.08605 .91873	.07814 .88637	.06693 .87193	.05727 .86268	.04958 .85711	.04352 .85354	.03868 .85114	.03475 .84945	.03152 .84822
.30	.07660 .97556	.12005 .92372	.12710 .87651	.11896 .84385	.10709 .82279	.09561 .80910	.08558 .79992	.07707 .79355	.06990 .78838	.06382 .78560
.40	.08229 .98080	.13975 .93305	.16431 .87840	.16558 .83264	.15613 .79930	.14348 .77602	.13083 .75973	.11931 .74811	.10915 .73963	.10030 .73329
.50	.08411 .9830	.15140 .94179	.19193 .88562	.20418 .83118	.20044 .78701	.18893 .75405	.17519 .73009	.16149 .71261	.14883 .69968	.13748 .68993
.60	.08514 .98675	.15864 .94907	.21008 .89434	.23524 .83494	.23911 .78196	.23065 .73992	.21689 .70826	.20175 .68471	.18704 .66711	.17347 .65377
.70	.08577 .98856	.16339 .95498	.22382 .90294	.26003 .84128	.27240 .78151	.26815 .73124	.25536 .69209	.23936 .66248	.22295 .64018	.20738 .62322
.80	.08619 .98994	.16663 .95979	.23391 .91085	.27985 .84874	.30094 .78395	.30176 .72635	.29061 .68005	.27417 .64450	.25632 .61755	.23891 .59704
.90	.08647 .99103	.16894 .96374	.24147 .91794	.29579 .85650	.32544 .78816	.33184 .72416	.32284 .67106	.30629 .62972	.28716 .59824	.26801 .57428
1.00	.08668 .99191	.17064 .96703	.24724 .92419	.30869 .86415	.34650 .79347	.35880 .72386	.35235 .66436	.33590 .61739	.31563 .58150	.29482 .55423

$$\frac{U/K+IV/K}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 45$$

1/B	1/A= .10	1/A= .20	1/A= .30	1/A= .40	1/A= .50	1/A= .60	1/A= .70	1/A= .80	1/A= .90	1/A=1.00
.10	.03804 .96177	.03024 .93903	.02262 .93154	.01772 .92847	.0144 .92615	.01220 .9261	.01053 .92558	.00925 .92524	.00621 .92501	.00744 .92484
.20	.06107 .96922	.07550 .92298	.08869 .89409	.05092 .87839	.05046 .86953	.04371 .85419	.03838 .86076	.03412 .85845	.03066 .85683	.02781 .85565
.30	.06083 .97685	.10523 .92786	.11174 .88313	.10430 .85198	.09466 .83176	.08465 .81856	.07586 .80968	.06837 .80349	.06205 .79905	.05669 .79576
.40	.07205 .98182	.12238 .93678	.14430 .88527	.14603 .84185	.13826 .80991	.12745 .78740	.11649 .77155	.10641 .76020	.09748 .75187	.08956 .74564
.50	.07364 .98513	.13250 .94510	.16753 .89241	.17992 .84109	.17759 .79898	.16825 .76715	.15654 .74377	.14471 .72658	.13364 .71379	.12365 .70411
.60	.07454 .98745	.13877 .95200	.18399 .90086	.20699 .84527	.21178 .79510	.20359 .75464	.19433 .72371	.18149 .70045	.16876 .68292	.15687 .66955
.70	.07509 .98917	.14287 .95760	.19580 .90912	.22843 .85181	.24103 .79566	.23915 .74751	.22928 .70929	.21603 .67995	.20201 .65760	.18845 .64048
.80	.07545 .99047	.14568 .96214	.20443 .91668	.24542 .85931	.26593 .79895	.26912 .74413	.26133 .69900	.24015 .66367	.23311 .63652	.21805 .61566
.90	.07510 .99150	.14767 .96587	.21088 .92340	.25897 .86699	.28710 .80389	.29582 .74339	.29065 .69176	.27790 .65059	.26204 .61671	.24559 .59418
1.00	.07588 .99234	.14913 .96896	.21578 .92931	.26987 .87445	.30515 .80375	.31983 .74450	.31749 .68681	.30544 .63996	.28891 .60343	.27115 .57532

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN(A+IB)$$

$$K=\sin 50$$

1/B	1/A= .10	1/A= .20	1/A= .30	1/A= .40	1/A= .50	1/A= .60	1/A= .70	1/A= .80	1/A= .90	1/A=1.00
.10	.03365 .98339	.02676 .94160	.02002 .93441	.01568 .93146	.01281 .93001	.01080 .92919	.00932 .92869	.00819 .92836	.00731 .92797	.00659 .92797
.20	.05399 .97054	.06682 .92629	.06089 .89858	.05228 .88347	.04479 .87493	.03882 .86977	.03409 .86647	.03031 .86423	.02725 .86266	.02472 .86152
.30	.06085 .97785	.09308 .93107	.09904 .88828	.09318 .85834	.08423 .83882	.07541 .82603	.06764 .81740	.06100 .81138	.05538 .80705	.05061 .80385
.40	.06368 .98261	.10819 .93986	.12781 .89056	.12372 .84899	.12317 .81820	.11381 .79638	.10420 .78092	.09531 .76981	.08739 .76165	.08045 .75552
.50	.08509 .98577	.11707 .94764	.14823 .89759	.15971 .84870	.15826 .80826	.15045 .77743	.14038 .75460	.13004 .73772	.12030 .72510	.11144 .71551
.60	.06588 .98800	.12257 .95825	.15264 .90579	.18354 .85310	.18864 .80518	.18397 .76610	.17457 .73591	.16354 .71301	.15243 .69563	.14195 .68231
.70	.06636 .98964	.12817 .95959	.17294 .91377	.20230 .85970	.21451 .80639	.21403 .76009	.20622 .72283	.19510 .69390	.18302 .67166	.17115 .65451
.80	.06668 .99089	.12862 .96393	.18045 .92102	.21708 .86714	.23639 .81019	.24077 .75776	.23524 .71387	.22453 .67901	.21176 .65191	.19868 .63090
.90	.06690 .99187	.13036 .96749	.18604 .92746	.22881 .87457	.25488 .81551	.26449 .75800	.26177 .70796	.25183 .66732	.23861 .63540	.22444 .61058
1.00	.06706 .99267	.13154 .97044	.19028 .93310	.23319 .88194	.27053 .82164	.28552 .76002	.28600 .70433	.27716 .65809	.26364 .62142	.24848 .59284

U/K+IV/K'
-1
U+IV=SN (A+IB)

K=SIN 55

1/B	1/A= .10	1/A= .20	1/A= .30	1/A= .40	1/A= .50	1/A= .60	1/A= .70	1/A= .80	1/A= .90	1/A=1.00
.10	.62994 .96467	.02362 .94363	.01783 .93668	.01397 .93363	.01141 .93243	.00962 .93164	.00630 .93115	.00730 .93084	.00651 .93062	.00587 .93046
.20	.04803 .97159	.05949 .92891	.05426 .90213	.04662 .88750	.03997 .87922	.03465 .87421	.03043 .87160	.02706 .86883	.02433 .86731	.02207 .86619
.30	.05412 .97064	.08283 .93358	.08026 .89232	.08317 .86336	.07527 .84442	.06746 .83197	.06054 .82356	.05463 .81768	.04961 .81345	.04535 .81032
.40	.05664 .98323	.09023 .94191	.11303 .89470	.11579 .85459	.11017 .82475	.10197 .80349	.09349 .78839	.08559 .77750	.07854 .76948	.07234 .76345
.50	.05789 .98628	.10409 .94962	.13193 .90160	.14247 .85461	.14157 .81553	.13493 .78554	.12616 .76321	.11707 .74662	.10843 .73417	.10055 .72469
.60	.05859 .98843	.10896 .95599	.14466 .90960	.16359 .85913	.16868 .81301	.16505 .77510	.15709 .74559	.14751 .72305	.13775 .70506	.12847 .69263
.70	.05902 .99001	.11214 .96114	.15373 .91723	.18014 .86573	.19166 .81464	.19201 .76990	.18571 .73353	.17625 .70504	.16575 .68299	.15531 .66588
.80	.05930 .99122	.11430 .96532	.16033 .92435	.19314 .87307	.21102 .81875	.21591 .76831	.21193 .72558	.20308 .69125	.19214 .66432	.18072 .64330
.90	.05950 .99217	.11584 .96875	.16523 .93055	.20340 .88045	.22729 .82427	.23703 .76921	.23585 .72065	.22799 .68067	.21686 .64890	.20461 .62398
1.00	.05964 .99293	.11697 .97159	.16695 .93599	.21158 .88754	.24100 .83053	.25567 .77182	.25766 .71798	.25111 .67255	.23997 .63601	.22697 .60723

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 60$$

	1/8	1/A= .10	1/A= .20	1/A= .30	1/A= .40	1/A= .50	1/A= .60	1/A= .70	1/A= .80	1/A= .90	1/A=1.00
.10		.02572 .96568	.02127 .94524	.01592 .93848	.01247 .93571	.01019 .93434	.00859 .93358	.00741 .93311	.00652 .93280	.00581 .93258	.00524 .93243
.20		.04286 .97241	.05312 .93093	.04849 .90494	.04168 .89070	.03575 .88262	.03093 .87774	.02723 .87461	.02421 .87249	.02177 .87100	.01975 .86991
.30		.04829 .97926	.07394 .93556	.07887 .89551	.07441 .86734	.06740 .84886	.06045 .82569	.05427 .82846	.04899 .82270	.04450 .81855	.04069 .81546
.40		.05054 .98372	.08587 .94368	.10167 .89794	.10358 .85900	.09871 .82992	.09144 .80914	.08395 .79433	.07692 .78363	.07063 .77574	.06508 .76979
.50		.05165 .98665	.09286 .95117	.11778 .90473	.12740 .85922	.12695 .82124	.12114 .79195	.11344 .77005	.10540 .75372	.09772 .74143	.09069 .73205
.60		.05227 .98877	.09719 .95736	.12907 .91255	.14619 .86382	.15109 .81912	.14821 .78219	.14137 .75325	.13300 .73105	.12438 .71404	.11613 .70091
.70		.05266 .99030	.10001 .96236	.13711 .92009	.16087 .87038	.17157 .82103	.17233 .77755	.16721 .74198	.15908 .71391	.14990 .69206	.14068 .67504
.80		.05291 .99147	.10193 .96641	.14295 .92691	.17236 .87762	.18876 .82533	.19377 .77649	.19085 .73477	.18344 .70098	.17400 .67427	.16399 .65331
.90		.05309 .99240	.10330 .96973	.14728 .93293	.18142 .88486	.20116 .83097	.21260 .77785	.21239 .73057	.20607 .69125	.19661 .65973	.18596 .63482
1.00		.05321 .99314	.10430 .97249	.15056 .93620	.18861 .89179	.21524 .83726	.22917 .78086	.23197 .72861	.22705 .68393	.21777 .64772	.20658 .61890

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

K=SIN 65

1/B	1/A= .10	1/A= .20	1/A= .30	1/A= .40	1/A= .50	1/A= .60	1/A= .70	1/A= .80	1/A= .90	1/A=1.00
.10	.02385 .96648	.01899 .94650	.01421 .93990	.01114 .93719	.00910 .93585	.00767 .93510	.00652 .93464	.00582 .93434	.00519 .93413	.00468 .93390
.20	.03825 .97306	.04743 .93260	.04332 .90715	.03725 .89321	.03195 .88530	.02771 .88052	.02435 .87745	.02165 .87537	.01947 .87391	.01766 .87284
.30	.04310 .97975	.06600 .93711	.07046 .89801	.06653 .87046	.06031 .85235	.05411 .84041	.04860 .83232	.04388 .82666	.03987 .82258	.03646 .81956
.40	.04510 .98410	.07663 .94506	.09080 .90046	.09261 .86244	.08836 .83397	.08197 .81353	.07528 .79902	.06902 .78847	.06339 .78069	.05844 .77482
.50	.04609 .98700	.08286 .95238	.10514 .90716	.11387 .86282	.11355 .82569	.10853 .79698	.10182 .77544	.09469 .75933	.08786 .74718	.08158 .73780
.60	.04665 .98904	.08671 .95842	.11519 .91484	.13060 .86744	.13520 .82386	.13287 .78771	.12696 .75927	.11960 .73736	.11198 .72052	.10465 .70749
.70	.04699 .99053	.08922 .96330	.12232 .92222	.14365 .87396	.15347 .82597	.15453 .78352	.15020 .74859	.14317 .72090	.13511 .69925	.12696 .68232
.80	.04722 .99188	.09093 .96726	.12750 .92889	.15383 .88111	.16875 .83039	.17364 .78282	.17145 .74194	.16518 .70863	.15698 .68215	.14819 .66127
.90	.04737 .99258	.09214 .97050	.13133 .93477	.16184 .88824	.18151 .83608	.19042 .78449	.19078 .73868	.18562 .69956	.17753 .66830	.16823 .64346
1.00	.04748 .99330	.09303 .97318	.13424 .93991	.16820 .89503	.19219 .84238	.20514 .78776	.20832 .73682	.20456 .69295	.19677 .65699	.18709 .62822

U/K+IV/K'
-1
U+IV=SN (A+IB)

K=SIN 70

1/B	1/A= .10	1/A= .20	1/A= .30	1/A= .40	1/A= .50	1/A= .60	1/A= .70	1/A= .80	1/A= .90	1/A=1.00
.10	.02121 .98710	.01689 .94748	.01264 .94099	.00991 .93833	.00809 .93702	.00682 .93628	.00589 .93583	.00518 .93553	.00462 .93533	.00416 .93516
.20	.03401 .97356	.04218 .93385	.03854 .90886	.03315 .89515	.02844 .88732	.02467 .88267	.02168 .87964	.01928 .87760	.01733 .87616	.01573 .87511
.30	.03831 .98013	.05869 .93830	.06269 .89994	.05923 .87286	.05372 .85504	.04822 .84328	.04332 .83531	.03912 .82973	.03555 .82570	.03251 .82272
.40	.04009 .98440	.06013 .94611	.08077 .90240	.08245 .86505	.07872 .83710	.07308 .81701	.06716 .80264	.06160 .79222	.05660 .78453	.05218 .77872
.50	.04097 .98724	.07365 .95331	.09349 .90902	.10134 .86557	.10117 .82912	.09685 .80085	.09089 .77959	.08459 .76367	.07853 .75164	.07296 .74243
.60	.04147 .98924	.07707 .95924	.10240 .91658	.11619 .87021	.12044 .82749	.11852 .79195	.11338 .76390	.10693 .74224	.10020 .72555	.09370 .71261
.70	.04177 .99071	.07929 .96403	.10872 .92384	.12775 .87668	.13666 .82973	.13782 .78807	.13417 .75366	.12807 .72629	.12100 .70481	.11380 .68798
.80	.04197 .99183	.08081 .96790	.11330 .93039	.13676 .88375	.15020 .83422	.15482 .78763	.15316 .74743	.14781 .71452	.14068 .68825	.13296 .66747
.90	.04211 .99271	.08188 .97108	.11669 .93616	.14383 .89079	.16149 .83993	.16972 .78952	.17040 .74416	.16613 .70594	.15918 .67493	.15107 .65019
1.00	.04271 .99343	.08267 .97371	.11926 .94120	.14944 .89747	.17092 .84623	.18276 .79296	.18602 .74306	.18311 .69982	.17651 .66416	.16813 .63547

$$\frac{U/K+IV/K}{-1}$$

$$U+IV=SN \quad (A+IB)$$

K=SIN 75

1/B	1/A= .10	1/	.20	1/A= .30	1/A= .40	1/A= .50	1/A= .60	1/A= .70	1/A= .80	1/A= .90	1/A=1.00
.10	.01357 .96755		.01487 .94821	.01113 .94181	.00872 .93918	.00713 .93789	.00601 .93716	.00518 .93671	.00456 .93642	.00406 .93622	.00367 .93607
.20	.02994 .97793		.03714 .93478	.03394 .91012	.02920 .89660	.02506 .88892	.02173 .88427	.01910 .88128	.01699 .87926	.01527 .87784	.01386 .87680
.30	.03372 .98041		.05166 .93919	.05521 .90136	.05218 .87464	.04735 .85705	.04251 .84542	.03820 .83754	.03450 .83202	.03136 .82803	.02868 .82507
.40	.03529 .98462		.05996 .94690	.07112 .90384	.07264 .86705	.06940 .83941	.06446 .81955	.05926 .80533	.05437 .79502	.04997 .78739	.04608 .78163
.50	.03606 .98742		.06482 .95399	.08231 .91040	.08927 .86760	.08918 .83165	.08547 .80372	.08024 .78268	.07472 .76690	.06940 .75496	.06449 .74582
.60	.03650 .98939		.06732 .95984	.09013 .91787	.10232 .87224	.10615 .83017	.10456 .79508	.10012 .76734	.09449 .74586	.08860 .72929	.08290 .71642
.70	.03677 .99084		.06978 .96456	.09567 .92504	.11247 .87868	.12042 .83250	.12158 .79143	.11849 .75742	.11322 .73029	.10706 .70696	.10076 .69221
.80	.03694 .99195		.07111 .96838	.09969 .93150	.12037 .88569	.13231 .83703	.13654 .79117	.13526 .75149	.13070 .71889	.12453 .69279	.11781 .67209
.90	.03707 .99282		.07205 .97151	.10266 .93719	.12657 .89265	.14221 .84275	.14964 .79321	.15047 .74849	.14692 .71067	.14096 .67987	.13393 .65521
1.00	.03715 .99352		.07275 .97411	.10492 .94215	.13148 .89926	.15047 .84903	.16109 .79677	.16424 .74764	.16154 .70490	.15635 .66948	.14913 .64089

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 80$$

1/B	1/A= .10	1/A= .20	1/A= .30	1/A= .40	1/A= .50	1/A= .60	1/A= .70	1/A= .80	1/A= .90	1/A=1.00
.10	.01607 .96787	.01280 .94871	.00958 .94237	.00751 .93977	.00614 .93848	.00517 .93775	.00446 .93732	.00392 .93703	.00350 .93683	.00316 .93669
.20	.02577 .97419	.03198 .93542	.02923 .91100	.02516 .89759	.02159 .88537	.01872 .88537	.01645 .88241	.01464 .88041	.01316 .87900	.01194 .87797
.30	.02903 .98060	.04448 .93580	.04755 .90235	.04496 .87588	.04080 .85843	.03664 .84690	.03293 .83908	.02974 .83360	.02703 .82954	.02473 .82670
.40	.03038 .98477	.05162 .94744	.06124 .90482	.06258 .88840	.05931 .84101	.05553 .82131	.05110 .80720	.04690 .79695	.04311 .78937	.03976 .78365
.50	.03105 .98755	.05580 .95446	.07087 .91134	.07689 .88899	.07686 .83339	.07368 .80579	.06922 .78482	.06448 .76913	.05990 .75727	.05568 .74816
.60	.03142 .98950	.05339 .96026	.07759 .91876	.08312 .87364	.09148 .83201	.09017 .79724	.08639 .76971	.08157 .74837	.07652 .73189	.07162 .71907
.70	.03165 .99093	.06007 .96493	.08236 .92586	.09685 .88005	.10375 .83439	.10483 .79374	.10225 .76001	.09776 .73306	.09250 .71183	.08710 .69514
.80	.03181 .99203	.06121 .96871	.08581 .93226	.10363 .88782	.11338 .83895	.11771 .79360	.11671 .75428	.11287 .72190	.10763 .69593	.10188 .67530
.90	.03191 .99289	.06202 .97181	.08836 .93789	.10895 .89392	.12248 .84468	.12898 .79573	.12982 .75146	.12689 .71342	.12185 .68328	.11587 .65869
1.00	.03199 .99358	.06262 .97438	.09030 .94281	.11316 .90048	.12956 .85094	.13882 .79936	.14163 .75078	.13986 .70839	.13518 .67316	.12906 .64465

$$\frac{U/K+IV/K'}{-1}$$

$$J+IV=SN \quad (A+IB)$$

K=SIN 85

1/8	1/A= .10	1/A= .20	1/A= .30	1/A= .40	1/A= .50	1/A= .60	1/A= .70	1/A= .80	1/A= .90	1/A=1.00
.10	.01308 .96806	.01042 .94900	.00780 .94270	.00611 .94011	.00499 .93884	.00421 .93812	.00363 .93768	.03319 .93739	.00285 .93719	.00257 .93705
.20	.02097 .97434	.02602 .93579	.02379 .91151	.02047 .89816	.01757 .89061	.01524 .88602	.01339 .88307	.01191 .88108	.01071 .87968	.00972 .87865
.30	.02362 .98071	.03619 .94015	.03869 .90292	.03659 .87660	.03321 .85924	.02982 .84777	.02681 .83998	.02422 .83453	.02201 .83059	.02013 .82766
.40	.02472 .98486	.04200 .94775	.04983 .90540	.05093 .86919	.04869 .84195	.04525 .82233	.04162 .80829	.03819 .79809	.03511 .79054	.03239 .78483
.50	.02526 .98762	.04540 .95474	.05766 .91189	.06257 .86381	.06257 .83441	.05993 .80687	.05638 .78607	.05253 .77045	.04881 .75862	.04537 .74954
.60	.02556 .98956	.04750 .96050	.06312 .91927	.07171 .87446	.07446 .83308	.07342 .79851	.07037 .77111	.06647 .74985	.06237 .73341	.05838 .72063
.70	.02575 .99098	.04886 .96514	.06700 .92634	.07880 .88085	.08444 .83550	.08235 .79503	.08329 .76153	.07967 .73468	.07540 .71352	.07102 .69686
.80	.02587 .99207	.04979 .96890	.06980 .93270	.08431 .88779	.09275 .84007	.09544 .79502	.09507 .75531	.09199 .72367	.08775 .69778	.08309 .67719
.90	.02596 .99293	.05045 .97198	.07188 .93830	.08863 .89467	.09966 .84580	.10500 .79720	.10575 .75319	.10342 .71583	.09936 .68528	.09452 .66074
1.00	.02602 .99362	.05094 .97454	.07345 .94319	.09205 .90119	.10541 .85205	.11299 .80087	.11540 .75261	.11399 .71043	.11024 .67532	.10531 .64685

$$\frac{U/K+IV/K}{-1}$$

$$U+IV=SN \quad (A+IB)$$

K=SIN 86

1/3	1/A= .10	1/A= .20	1/A= .30	1/A= .40	1/A= .50	1/A= .60	1/A= .70	1/A= .80	1/A= .90	1/A=1.00
.10	.01235 .95800	.00584 .94904	.00736 .94274	.00577 .94015	.00471 .93888	.00397 .93816	.00343 .93772	.00302 .93743	.00259 .93723	.00243 .93709
.20	.01980 .97431	.02457 .93584	.02246 .91157	.01513 .89925	.01659 .89068	.01439 .88610	.01254 .88315	.01125 .88116	.01011 .87976	.00918 .87874
.30	.02230 .98073	.03417 .94020	.03653 .90299	.03455 .87118	.03136 .85934	.02816 .84787	.02511 .84009	.02287 .83464	.02078 .83070	.01901 .82778
.40	.02334 .98487	.03965 .94779	.04705 .90547	.04309 .86929	.04598 .84206	.04273 .82247	.03930 .80842	.03607 .79822	.03316 .79067	.03058 .78497
.50	.02385 .98761	.04285 .95477	.05444 .91196	.05908 .86991	.05908 .83454	.05665 .80703	.05324 .78622	.04960 .77060	.04609 .75878	.04285 .74971
.60	.02414 .98957	.04484 .96053	.05960 .91333	.06770 .87455	.07031 .83321	.06933 .79866	.06645 .77127	.06277 .75802	.05890 .73359	.05514 .72081
.70	.02431 .99039	.04613 .96517	.06326 .92639	.07440 .88095	.07973 .83563	.08060 .79525	.07865 .76171	.07523 .73487	.07121 .71372	.06707 .69707
.80	.02443 .99208	.04703 .96893	.06590 .93275	.07960 .88788	.08758 .84021	.09050 .79519	.08978 .75610	.08687 .72381	.08287 .69800	.07848 .67741
.90	.02451 .99294	.04764 .97200	.06786 .93835	.08368 .89475	.09410 .84593	.09915 .79738	.09886 .75340	.09766 .71605	.09384 .68552	.08928 .66098
1.00	.02457 .99363	.04809 .97456	.06934 .94323	.08691 .90127	.09952 .85218	.10669 .80105	.10897 .75283	.10765 .71067	.10412 .67556	.09946 .64712

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SH \quad (A+IB)$$

$$K=\sin 87$$

1/B	1/A= .10	1/A= .20	1/A= .30	1/A= .40	1/A= .50	1/A= .60	1/A= .70	1/A= .80	1/A= .90	1/A=1.00
	.01152 .96809	.00916 .94906	.00687 .94277	.00538 .94019	.00440 .93591	.00371 .93819	.00320 .93776	.00281 .93747	.00251 .93727	.00226 .93712
.20	.91847 .97437	.02292 .93587	.02055 .91162	.01804 .89830	.01548 .89074	.01343 .88616	.01180 .88321	.01050 .88122	.00944 .87982	.00856 .87880
.30	.92081 .98074	.03188 .94023	.03409 .90305	.03224 .87675	.02926 .85941	.02628 .84795	.02352 .84017	.02134 .83472	.01939 .83379	.01774 .82787
.40	.02177 .98488	.03708 .94702	.04390 .90552	.04487 .86336	.04200 .84215	.03987 .82257	.03667 .80853	.03366 .79833	.03034 .79078	.02854 .78508
.50	.02225 .98764	.04000 .95480	.05080 .91201	.05513 .86999	.05513 .83463	.05287 .80711	.04968 .78634	.04629 .77973	.04301 .75890	.03999 .74984
.60	.02252 .98957	.04111 .96111	.05561 .91938	.06318 .87463	.06561 .83331	.06470 .79675	.06201 .77140	.05858 .75016	.05496 .73373	.05146 .72036
.70	.02269 .99100	.04305 .96519	.05902 .92644	.06942 .88102	.07440 .83573	.07521 .79537	.07340 .76185	.07021 .73502	.06646 .71387	.06260 .69123
.80	.02280 .99208	.04387 .96695	.06149 .93279	.07423 .88795	.08172 .84031	.08445 .79532	.08370 .75625	.08107 .72404	.07735 .69817	.07324 .67758
.90	.02287 .99294	.04445 .97202	.06332 .93839	.07888 .89482	.08780 .84604	.09252 .79751	.09319 .75356	.09115 .71023	.08758 .68570	.08333 .66117
1.00	.02292 .99303	.04487 .97457	.06470 .94327	.08109 .90133	.09287 .85229	.09956 .80119	.10169 .75300	.10046 .71066	.09717 .67578	.09283 .64732

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN \quad (A+IB)$$

$$K=\sin 86$$

1/8	1/A= .10	1/A= .20	1/A= .30	1/A= .40	1/A= .50	1/A= .60	1/A= .70	1/A= .80	1/A= .90	1/A=1.00
.10	.01053 .96811	.00839 .94908	.03626 .94279	.00492 .94021	.00462 .93843	.00339 .93822	.00293 .93778	.00257 .93749	.00229 .93729	.09207 .93715
.20	.01689 .97438	.02096 .93590	.01916 .91165	.01649 .89834	.01415 .89078	.01227 .98620	.01079 .88326	.00959 .88127	.00863 .87987	.00783 .87884
.30	.01542 .98075	.02914 .94025	.03116 .90308	.02947 .87680	.02675 .85947	.02402 .84801	.02159 .84023	.01951 .83478	.01773 .83085	.01622 .82793
.40	.01990 .98489	.03582 .94784	.04013 .90556	.04102 .86941	.03922 .84221	.03645 .82263	.03352 .80860	.03077 .79849	.02829 .79086	.02609 .78516
.50	.02034 .98764	.03656 .95462	.04843 .91205	.05040 .87004	.05040 .83470	.04833 .80719	.04542 .78642	.04232 .77081	.03932 .75899	.03656 .74993
.60	.02059 .98958	.03625 .95057	.05083 .91942	.05775 .87468	.05997 .83336	.05914 .79886	.05669 .77149	.05355 .75025	.05025 .73363	.04704 .72106
.70	.02074 .99100	.03935 .96520	.05395 .92647	.06346 .88107	.06801 .83581	.06875 .79546	.06710 .76195	.06419 .73513	.06076 .71398	.05723 .69754
.80	.02084 .99209	.04010 .96896	.05621 .93282	.06790 .88801	.07479 .84038	.07720 .79541	.07659 .75636	.07412 .72415	.07071 .69829	.06693 .67771
.90	.02091 .99294	.04063 .97203	.05788 .93841	.07137 .89487	.08026 .84611	.08458 .79761	.08519 .75367	.08333 .71635	.08007 .68583	.07618 .66131
1.00	.02096 .99363	.04102 .97458	.05915 .94329	.07412 .90138	.08489 .85236	.09191 .80129	.09296 .75312	.09185 .71100	.08884 .67592	.08482 .64747

$$\frac{U/K+IV/K'}{-1}$$

$$U+IV=SN(A,IR)$$

K=SIN 89

1/8	1/A= .10	1/A= .20	1/A= .30	1/A= .40	1/A= .50	1/A= .60	1/A= .70	1/A= .80	1/A= .90	1/A=1.00
.10	.00319 .00311	.00732 .04909	.00540 .04280	.00429 .04022	.00351 .03895	.00296 .03823	.00255 .03779	.00224 .03750	.00200 .03731	.00180 .03716
.20	.01473 .07438	.01828 .03591	.01671 .01167	.01430 .03837	.01234 .03080	.01011 .00623	.00941 .08326	.00837 .08129	.00752 .07983	.00683 .07887
.30	.01659 .08075	.02542 .04027	.02718 .03311	.02570 .07683	.02333 .05950	.02095 .04804	.01883 .04027	.01701 .03482	.01546 .03099	.01415 .02797
.40	.01736 .08489	.02950 .04785	.03500 .03559	.03578 .06944	.03421 .04225	.03171 .02267	.02924 .08064	.02684 .079845	.02457 .07990	.02276 .078521
.50	.01774 .08764	.03189 .05483	.04050 .04207	.04396 .07007	.04396 .03474	.04215 .00723	.03962 .078647	.03691 .077086	.03430 .075905	.03189 .074998
.60	.01756 .08998	.03336 .06058	.04434 .04944	.05037 .08471	.05231 .03342	.05159 .07891	.04915 .077155	.04671 .075031	.04383 .073389	.04104 .072112
.70	.01809 .09100	.03732 .06521	.04706 .052649	.05535 .08110	.05932 .03585	.05997 .079551	.05853 .076201	.05599 .073519	.05300 .071405	.04992 .069741
.80	.01816 .09209	.03498 .06297	.04503 .032204	.05922 .08804	.06510 .04013	.06734 .079547	.06681 .075642	.06465 .072422	.06168 .069836	.05841 .067778
.90	.01824 .09294	.03544 .07204	.05049 .03843	.06226 .08490	.07001 .04615	.07377 .079767	.07131 .075374	.07259 .071643	.06985 .068591	.06646 .066135
1.00	.01928 .09363	.03578 .07459	.05159 .04331	.06159 .09141	.07404 .05240	.07930 .030135	.08109 .075319	.08012 .071108	.07750 .067601	.07404 .064755